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ABSTRACT

These proceedings begin with the schedule, conference committee membership lists, and detailed agenda of the 1998 conference of the Academy of Human Resource Development, which explored the relationship between learning and performance. Presented next are papers grouped by the conference's 35 symposium topics, which are as follows: university instruction in human resource development (HRD); evaluating the impact of HRD; learning organization practices; HRD issues in Asia; self-directed workplace learning; strategic HRD; innovation and creativity; adult learning in the workplace; HRD professional development; advances in qualitative research; work analysis and expertise; the changing workplace; ethics and integrity; performance evaluation processes; change processes in organizations; individual differences in learning; transfer of learning; action learning issues; HRD in the United Kingdom; technology in HRD; integrating learning and performance; leadership and executive development; integrating HRD practice and research; HRD function in organizations; research on emerging issues; professionalizing the field; enhancing workplace performance; core directions in HRD; management assessment; advancing the profession through journals; cultural concerns; expanded roles for HRD; management development; the discipline of HRD; and on-the-job learning. (MN)

ED 428 224

AHRD

ACADEMY OF HUMAN RESOURCE DEVELOPMENT

1998 Conference Proceedings

March 4 - March 8, 1998
Oak Brook, IL

BEST COPY AVAILABLE

Conference Chair:
Elwood F. Holton III
Louisiana State University

Proceedings Editor:
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From the Editor

Welcome to Chicago! These are exciting and challenging times for the human resource development profession, and for the Academy of HRD in particular. Yet, as these proceedings will attest, we continue to meet the challenge expressed by the Academy's mission—to lead the HRD field through research. The work presented here, 128 papers from 202 scholars from 11 countries, is among the finest research available in the field today. You will be stimulated by the scholarly debate and dialogue these papers will generate.

Enjoy the conference and the proceedings. Please give us your feedback and ideas for improvement so that we can make next year's conference even better. Take a minute to review the following tips on using the proceedings.

Tips on Using the Proceedings

1. Papers are grouped by symposium number. Symposium numbers can be found in the Conference Program immediately following this note.
2. "Table of Contents" for the proceedings is the Conference Program.
3. Two page numbers are indicated on each paper.
    - At the bottom of the page is a combination of symposium number and paper within each symposium (e.g., 2-1 is the first paper in symposium number two). This format allows you to locate papers easily for each symposium during the conference.
    - At the top of the page are sequential page numbers. These page numbers will enable you to cite proceedings papers more easily in the future.
4. Only those sessions in the Conference Program that have a number to the left of the title have papers included. In addition, there are no papers for the keynote presentations, Ethics and Integrity (symposium 13), Global 100 (symposium 23), research forum (symposium 25), and breakfast or lunch sessions.
5. An *Index to Authors* and an *Index to Keywords* appear at the end of the proceedings.

My sincere thanks to all the authors and the conference chair for their fine work and cooperation with me in producing this volume. The Academy of HRD is proud to produce such a fine showcase of its work—this Proceedings.

Richard J. Torraco
Proceedings Editor

1998 CONFERENCE OVERVIEW

Chicago Mariott Oak Brook Hotel ◆ Chicago, IL
March 4 - 8, 1998

AHRD

The Academy of Human Resource Development
P. O. Box 25113
Baton Rouge, LA 70894 USA
(504) 334-1874, Fax (504) 334-1875, office@ahrd.org

Learning & Performance: Powerful Partners

	Thursday, March 5	Friday, March 6	Saturday, March 7	Sunday, March 8
7:00-8:15 am	**Pre-conferences:** Wednesday, March 4, 10:00 through Thursday March 5, noon • Learning: IFAL- Action Learning • Performance through HRD • Integrity in HRD • Globalization: Multicultural Simulations in HRD	• AHRD Committee Breakfasts • Food-N-Thought Discussion & Meal Groups, join in!	• AHRD Committee Breakfasts • Food-N-Thought Discussion & Meal Groups, join in!	• AHRD Board Breakfast • Food-N-Thought Discussion & Meal Groups, join in!
8:30-10:00 am		***–Keynote Presentation–*** **Dr. David Knoke, Professor of Sociology & Principal Investigator, NOS University of Minnesota** ***THE NATIONAL ORGANIZATIONS STUDY***	***–Keynote Presentation–*** **Dr. Nancy Snyder Corp. Director and Chief Learning Officer, Whirlpool Corporation** ***BUILDING ORG EXCELLENCE THROUGH LEARNING***	SYMPOSIUMS • Cultural Concerns • Expanded Roles for HRD • Management Development • Discipline of HRD • On-the-Job Learning
10:30-12:00 am		SYMPOSIUMS • Univ. Instruction in HRD • Evaluating the Impact of HRD • Learning Org. Practices • HRD Issues in Asia • Self-diirected Workplace Learning	SYMPOSIUMS • Indiv. Difference in Learning • Transfer of Learning • Action Learning Issues • HRD in the U.K. • Technology in HRD	***–Keynote Presentation–*** **Dr. Dorothy Marcic Professor of HRD & author of "Managing Through the Wisdom of Love"** ***LEARNING TO MANAGE THROUGH THE WISDOM OF LOVE***
12:00 noon	**Conference Registration Opens** 12:00-5:00 AHRD Board of Directors Meeting	• Food-N-Thought: Discussion and meal groups, join in! • Committee Meetings	• Food-N-Thought: Discussion and meal groups, join in! • Committee Meetings	12:00-1:00pm AHRD Business Meeting for all Academy members
1:30-3:00 pm	1-5:00 Corporate Univ. Tours 3-5:00pm Showcase of Host University, Northern Illinois University 5:00-6:00 Reception for HRD Graduate Students	SYMPOSIUMS • Strategic HRD • Innovation and Creativity • Adult Learning in the Workplace • HRD Professional Development • Advances in Qual. Research	SYMPOSIUMS • Integrating Learning and Perf. • Leadership and Exec. Dev. • AHRD Global 100 Session • HRD Function in Org. • Research Forum: Emerging Issues	Lunch & hotel checkout 1-2:00pm AHRD Board of Directors Mtg. & Lunch
3:30-5:00 pm	*EXHIBITORS OPEN*	SYMPOSIUMS • Work Anlysis and Expertise • Changing Workplace • Special: Ethics and Integrity • Performance Eval. Process • Change Processes in Org.	SYMPOSIUMS • Professionalizing the Field. • Enhancing Workgroup Perf. • Core Directions in HRD • Management Assessment • HRD Journals	
Evening	6-7:00pm Grand Reception & Conference Overview 7-8:30pm HRD Town Forum **CRITIQUE vs. COLLEGIALITY: BUILDING SCHOLARLY EXCELLENCE** Darlene Russ-Eft & Tim Baldwin	FREE EVENING 6:00pm HRDQ Editorial Board Mtg. & Dinner 6:00pm Global 100 Mtg. & Dinner	6:00-10:30pm President's Dinner & Awards Banquet for all conference attendees (included in registration)	

IN APPRECIATION

Dear Academy Members,

A special thank you to the following volunteers for their contributions to the 1998 AHRD Conference! It is my sincere hope that the list is complete. Please take a moment to extend your gratitude to these fine professionals who have made this wonderful event possible.

Best Regards,

Ed Holton

Chair, 1998 AHRD Conference

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Bronze Sponsors ($250+)

- Chicagoland Chapter of the American Society for Training and Development (CCASTD)
- The Graduate School, Northern Illinois University Department of Human Resources Education, University of Illinois

ROOMS FOR THE 1998 CONFERENCE

Lobby Level

Marquis Room
Oak Brook Room
Salon A
Salon B
Salon C
Salon D
Salon EF
Salon GH
West Lobby

Lower Level

Burr Ridge Room
Elmhurst Room
Hinsdale Room
La Grange Room
Lombard Room
Westchester Room
Villa Park Room

AHRD

Academy of Human Resource Development

The Academy of Human Resource Development was founded May 7, 1993. The Academy was formed to encourage the systematic study of human resource development theories, processes, and practices, to disseminate information about HRD, to encourage the application of HRD research findings, and to provide opportunities for social interaction among individuals with scholarly and professional interests in HRD, from multiple disciplines and from across the globe.

Presidents

1993-4	R. Wayne Pace Brigham Young University
1994-6	Karen E. Watkins University of Georgia
1996-8	Richard A. Swanson University of Minnesota
1998-2000	Elwood F. Holton III Louisiana State University

AHRD Annual Conferences

1993	Chartering conference
1994	San Antonio
1995	St. Louis
1996	Minneapolis
1997	Atlanta
1998	Chicago
1999	Washington D.C.

ACADEMY AWARDS

Outstanding Scholar Award

1994	Fred Otte, Georgia State University
1995	Ronald L. Jacobs, Ohio State University
1996	Victoria J. Marsick, Columbia University
1997	Gary N. McLean, University of Minnesota

Richard A. Swanson Award for Excellence in Research

HRDQ Vol. 1	Robert Golembiewski, University of Georgia and Ben-Chu Sun, National Cheng-Chi, Taiwan
HRDQ Vol. 2	Timothy T. Baldwin, Indiana University and Richard Magjuka, Indiana University
HRDQ Vol. 3	Ronald L. Jacobs, Ohio State University; Michael Jones, Kenworth Truck Company; and Sue Neil, Paccar,
HRDQ Vol. 4	Janice Rouiller, ASTD and Irwin Goldstein, University of Maryland
HRDQ Vol. 5	Jon Werner, University of South Carolina, Ann O'Leary, Texas A&M University, Timothy T. Baldwin, Indiana University, Kenneth N. Wexley, Human Resource Decisions, Inc.
HRDQ Vol. 6	Allen Church, W. Warner Burke and Associates, Inc.
HRDQ Vol. 7	Not yet awarded

ACADEMY AWARDS continued

Outstanding Academic Program Award

1994	University of Minnesota
1995	University of Twente, The Netherlands
1996	Not awarded
1997	Georgia State University

Outstanding HRD Book

1997	Michael Marquardt, George Washington University, "Building the Learning Organization"

Malcolm S. Knowles Outstanding Dissertation Award

1997	Svetlana Madzar, University of Minnesota

Ten Best Papers From the 1997 AHRD Conference Proceedings

Selected by review team, Robert L. Dilworth and Verna J. Willis, Editors

Reid A. Bates, Elwood F. Holton III and Dian L. Seyler, Louisiana State University
Laura L. Bierema, Michigan State University
Clyde T. Conine, Jr., Macon College
Barbara J. Daley, University of Wisconsin-Milwaukee
Carol D. Hansen and Janet Headley, Georgia State University
Lisa Horvath and Deborah Duarte, George Washington University
Constantine J. Kontoghiorghes, Georgia State University
Hallie M. Preskill, University of New Mexico
Richard J. Torraco and Mary Finnegan, University of Nebraska
Bohua Yan, Personnel Center of Liaoning Province, People's Republic of China and Gary N. McLean, University of Minnesota

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James Quinn
Darlene F. Russ-Eft
Gary Selden
Doug Smith
Rose Mary Wentling
Verna J. Willis

WEDNESDAY, MARCH 4
Pre-conference Activities

8:30am to 8:00pm — **CONFERENCE CENTRAL AND REGISTRATION OPEN** — *West Lobby*

10:00-12:00 — *Burr Ridge*

Refresher on Action Learning Concepts and Practice
International Federation for Action Learning (IFAL)
Chair: Michael Marquardt, George Washington University

Need an introduction or a quick refresher on Action Learning? Join this session to review key concepts and practices of Action Learning.

10:00-5:00 — *Hinsdale*
NEW

PRE-CONFERENCE - Globalization: Simulations in Multicultural HRD
Chair: Robert L. Dilworth, Virginia Commonwealth University

This session will have four simulations, with attendees able to select two of particular interest to them. The four simulations are: Needs Assessment and Organization Development, Curriculum Design, Learning Program Delivery, and Evaluation. Attendees will get exposure to the broad aspects of cross-cultural sensitivity and competence in a plenary session and then have the opportunity to operate out of their own culture during two three-and-one-half-hour simulations.

1:00-5:00 — *Elmhurst*

PRE-CONFERENCE - Learning through HRD
International Federation for Action Learning (IFAL)
Chair: Judy O'Neil, Northeast Training Services, IFAL President

This pre-conference will combine concepts of Action Learning with that of Open Space to create an opportunity for participants to explore Action Learning by working on a challenge or problem with a group of colleagues. Part of the process is also to examine how the group and its members can move beyond pre-existing limits of thought and perspective while the group is engaged in Action Learning.

1:00-5:00 — *Westchester*

PRE-CONFERENCE - Performance through HRD
Chair: Richard J. Torraco, University of Nebraska

This session will feature recognized experts in performance measurement from outside the field of HRD who will present innovative and provocative ideas to stimulate our dialogue on performance improvement research. Also, insights on research being conducted on cutting edge human performance technologies of selected Chicago area "corporate universities" (e.g., Motorola, Arthur Anderson, Sears, GE) will be presented . Additional research areas in performance improvement at the pre-conference will include research methodologies, cross- and interdisciplinary research, the human-technology interface, and knowledge work research.

1:00- **PRE-CONFERENCE - Integrity and HRD: Toward Fulfillment at Work** *La Grange*
5:00 **Chair: Neal Chalofsky, George Washington University**

This pre-conference will deal specifically with finding personal meaning in work. An open space configuration will be used to allow for book discussions, work in progress, issue exploration, personal sharing, storytelling, and other forms of reflective learning. Such topics as the new employee contract, spiritual concept of success, generation X and the lack of meaning in work, symptoms of disconnect and alienation from work, and the nature and potential of human beings may be included. The purpose of the pre-conference is to bring together a community of scholars and practitioners who will explore issues such as those mentioned above from both a personal and professional perspective.

AHRD SALUTES OUR PARTNERS

Our special thanks to these outstanding organizations who have joined with AHRD to help lead HRD through research

American Society for Training and Development
Berrett-Koehler Publishers
Business Outreach Books
EURESFORM
International Society for Performance Improvement
International Federation for Action Learning
Jossey-Bass Publishers
Routledge Press
University Forum for HRD

THURSDAY, MARCH 5
Pre-conference Activities

7:00am to 8:00pm — **CONFERENCE CENTRAL, REGISTRATION, AND EXHIBITS OPEN** — *West Lobby/ Foyer*

8:00am to 2:00pm — **PRE-CONFERENCE - Globalization continued** — *Hinsdale*
Chair: Robert L. Dilworth, Virginia Commonwealth University

8:00-12:00 — **PRE-CONFERENCE - Learning through HRD continued** — *Elmhurst*
International Federation for Action Learning (IFAL)
Chair: Judy O'Neil, IFAL President

7:15-12:00 — **PRE-CONFERENCE - Performance through HRD continued** — *Westchester*
Chair: Richard J. Torraco, University of Nebraska

8:30-12:00 — **PRE-CONFERENCE - Integrity through HRD continued** — *La Grange*
Chair: Neal E. Chalofsky, George Washington University

12:00-2:00 — **Lunch on your own**
(except for Globalization Pre-conference)

12:00-5:00 — **AHRD Board of Directors Meeting** (lunch served) — *Villa Park*

1:00-5:00 — **AFTERNOON WARM-UPS** — *Meet at Conference Central*

CORPORATE UNIVERSITY TOURS - 1:00 - 5:00 pm

- **Arthur Andersen Professional Education Center, St. Charles, IL**
- **Hamburger University at McDonald's Corporation, Oak Brook, IL**
- **Motorola University, Schaumburg, IL**

All tours depart from the Oak Brook Marriott Hotel beginning at 1:00 p.m. on Thursday, March 5. Boarding fees for van transportation will be $10.00 per person. The transportation limit for each tour is 20.

Site Host Showcase (3:00 - 5:00 pm) -Academic Showcase sponsored by Northern Illinois University. Standing presentation and brochures will showcase HRD programs in Illinois starting at 3:00 p.m. on Thursday, March 5 and will be available continuously through Saturday, March 7. Also learn about the Academy of HRD web-site.

5:00-6:00 — **Graduate Student Reception** — *Marquis*

Come meet other graduate students attending the conference. Sponsored by Northern Illinois University and University of Illinois, Urbana-Champagne

THURSDAY, MARCH 5

MAIN CONFERENCE OPENS

6:00-
7:00

OPENING CONFERENCE RECEPTION

All registered attendees are invited.
Refreshments served.

Salon BCD

7:00-
8:30

HRD Town Forum - An AHRD Tradition

Salon A

CRITIQUE VERSUS COLLEGIALITY:
BUILDING SCHOLARLY EXCELLENCE

Critique-The Method to Improve Theory, Research, and Practice in Human Resource Development
Darlene F. Russ-Eft, AchieveGlobal

The Folly of Moving to A More Critically Evaluative Culture at AHRD: Let's Not Go There
Timothy T. Baldwin, Indiana University

Facilitator: Richard J. Torraco, University of Nebraska

FRIDAY, MARCH 6

7:00am to 6:00pm **CONFERENCE CENTRAL, REGISTRATION, AND EXHIBITS OPEN** *West Lobby/ Foyer*

7:00-8:15 **Breakfast Food 'n Thoughts** Pull up a chair to meet and dialogue with any one of these groups *Oak Brook*

Book Review: ***The Conditions of Learning - Training Applications,*** R. M.. Gagne & K. L. Medsker
Facilitator: Deane Gradous, University of St. Thomas

Book Review: ***The New Organization Wealth***, K. E. Sveiby
Facilitator: Robin Lackey, University of New Mexico

Discussion Group: Conducting a Qualitative Dissertation Study
Facilitator: Nicholas Woolf, University of Iowa

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FRIDAY, MARCH 6

8:30-10:00 **Keynote Presentation** *Salon A*

Dr. David Knoke, University of Minnesota
Professor of Sociology and Co-Principal Investigator, The National Organizations Surveys

THE NATIONAL ORGANIZATIONS SURVEYS: INVESTIGATING THE CHANGING EMPLOYMENT CONTRACT

Employers efforts to adapt their firms to intense environmental pressures, arising from incessant technological innovation and fierce competition across global product markets, continue to transform relations between companies and their employees. In today's lean-and-mean economies, many firms are now much less committed to worker security. A pervasive "employabilty" orientation stresses employees' personal responsibilities for improving their own job skills and career development through short-term, project-based job assignments spanning numerous firms. Both companies and workers are increasingly embedded in complex and volatile network relations that generate intellectual and social capital, shape career opportunities, and alter perceptions and actions. Understanding the directions and implications of these changes and their impacts on organizations, workers, and communities is enhanced by data and measures collected from samples of diverse employers. I discuss the experiences, prospects, and problems in studying the changing employment contract using the National Organizations Surveys.

David Knoke is Professor of Sociology at the University of Minnesota-Twin Cities, where he specializes in the study of organizations and social networks. He is co-principal, with Arne Kalleberg and Peter Marsden, of the two National Organizations Surveys (1991 and 1997), the first of which resulted in the book *Organizations in America: Analyzing Their Structures and Human Resource Practices* (1996, Sage Publications). The second NOS is an investigation of the interorganizational relations of 1,008 establishments for subcontracting and training of their employees. Both projects were funded by the National Science Foundation. In addition to his work on the NOS, Knoke and other collaborators studied policy networks at the national level in energy, health, and labor in the U.S., Germany, and Japan, resulting in two research monographs (The Organizational State, 1987, with Edward Laumann; and Comparing Policy Networks, 1996, with Franz Pappi, Jeffrey Broadbent and Yutaka Tsujinaka). Knoke is past chair of the Organizations, Occupations and Work Section of the American Sociological Association and was a Fellow at the Center for Advanced Study in the Behavioral Sciences. He received his Ph.D. in 1972 from the University of Michigan.

Moderator: Rose Mary Wentling, University of Illinois

10:00-10:30 **Refreshment Break** *Salon A*

FRIDAY, MARCH 6

10:30 - 12:00 PM - CONCURRENT SYMPOSIUM SESSIONS

1 **University Instruction in HRD** *Salon GH*

Chair: Tim Hatcher, University of Arkansas

Developing a Distance Learning HRD Baccalaureate Degree for Working Adults
Barbara E. Hinton, University of Arkansas

An Evaluation of Distance Learning in the University of Minnesota Human Resource Development Program
Teresa Tillson, University of Minnesota
James Warner, University of Minnesota
Gary N. McLean, University of Minnesota

Incorporating Action Learning in the Classroom: A Case Study
Kimberly S. McDonald, Indiana-Purdue University Fort Wayne

A Study of the Learning Characteristics of a Group of Adults Undertaking a HRD Program in a Tertiary Environment
Bryan W. Smith, Perth University, Australia

2 **Evaluating the Impact of HRD** *Salon D*

Chair: Larry Dooley, Texas A & M

The Politics of Program Evaluation and the Misuse of Evaluation Findings
Hallie M. Preskill, University of New Mexico
Robin Lackey, University of New Mexico

Assessing the Business Results of Management Development Using the Critical Outcome Technique at CIGNA corporation
Brent W. Mattson, University of Minnesota
Lawrence J. Quartana, CIGNA Corporation
Richard A. Swanson, University of Minnesota

Investments in Intellectual Capital: Developing Methods for Measuring Impact and Value of HRD
Laurie J. Bassi, American Society for Training and Development
Mark E. Van Buren, American Society for Training and Development

Demonstrating the Financial Benefit of Human Resource Development: Status and Update on the Theory and Practice
Richard A. Swanson, University of Minnesota

Do You Know About the AHRD Global 100?

AHRD
Global 100

The AHRD Global 100 is a special group of HRD leaders who are reflective practitioners dedicated to linking their practice to HRD research and theory. By joining the AHRD Global 100, these members and their companies are making a public commitment to advancing the HRD profession through research.

***Researchers:** Attend session #23 to explore potential research partnerships*
***Practitioner-scholars:** Want to help set the research agenda? Interact with leading thinkers in HRD? Partner with HRD researchers? Then join the AHRD Global 100.*
Look for this symbol marking Global 100 members in the conference program

3 **Learning Organization Practices** *Salon B*

Chair: Toni Powell, Barry University

The Beliefs of Managers as Facilitators of Learning in Learning Organizations
Andrea D. Ellinger, Pennsylvania State University-Harrisburg
The Learning Organization as a Performance Improvement Strategy
Sandra M. Kaiser, Louisiana State University
Elwood F. Holton III, Louisiana State University
Examining Construct Validity of Dimensions of the Learning Organization Questionnaire
Baiyin Yang, Auburn University
Karen E. Watkins, University of Georgia
Victoria J. Marsick, Columbia University

4 **HRD Issues in Asia** *Salon C*

Chair: Robert L. Dilworth, Virginia Commonwealth University

The Japanese Human Resource Development System
Kiyoe Harada, Ohio State University
Structured On-the-Job Training: Status, Impacts, and Implementation Issues in Singapore Organizations
Ronald L. Jacobs, Ohio State University
A. Ahad Osman-Gani, Nanyang Technological University-Singapore
Transfer of Training Programs for Multinational Chain Hotels in Korea
Doo H. Lim, University of Illinois
Rose Mary Wentling, University of Illinois
Human Resource Development: The Key To Sustainable Growth and Competitiveness of Singapore
A. Ahad Osman-Gani, Nanyang Technological University
Wee-Liang-Tan, Nanyang Technological University

5 **Self-Directed Workplace Learning** *Salon EF*

Chair: Sharon J. Confessore, George Washington University

Self-Directed Work Teams: Implementation and Performance
Marcel van der Klink, University of Twente, Enschede, The Netherlands
Hilde ter Horst, University of Twente, Enschede, The Netherlands
Mature Self-Directed Work Teams: An Investigation into Training and Development
Mary Jane Willis, Technical-Vocational Institute
Patricia E. Boverie, University of New Mexico
Improving Learning Networks. No 'One Best Way' for Developing Learning Systems in Organizations
Loes E.C.M. Tijmensen, University of Nijmegen, The Netherlands
Ferd J. Van der Krogt, University of Nijmegen, The Netherlands
Learning-project Structures in Different Work Types: An Empirical Analysis
Rob F. Poell, University of Nijmegen, The Netherlands

FRIDAY, MARCH 6

12:00-1:15 **Lunch Food 'n Thoughts** Pull up a chair to meet and dialogue with any one of these groups — *Oak Brook*

Book Review: ***How Organizations Learn***, A. DiBella and E. C. Nevis
Facilitator: Loretta Donovan, Columbia University

Book Review: ***Corporate Creativity***, A. Robinson & S. Stern
Facilitator: Ted Raspiller, Northern Illinois University

12:00-1:15 **AHRD Global Strategies Task Force Meeting** NEW — *Burr Ridge*

12:00-1:15 ***Advances: Developing Human Resources*** **Editorial Board Meeting** NEW — *Oak Brook*

1:30 - 3:00 PM - CONCURRENT SYMPOSIUM SESSIONS

6 **Strategic HRD** — *Salon B*

Chair: Barry Johansen, Medtronics

The GEICO Challenge Session: A Model for Integrating Human Resource Development and Strategic Planning
Clyde T. Conine, Jr., Macon State College
Bill P. Criswell, GEICO

Strategic Alignment and Performance
Steven W. Semler, Personnel Decisions International

The Role of Scenarios in Business Strategy and Human Resource Development
Susan A. Lynham, University of Minnesota
Joanne Provo, University of Minnesota
Wendy E. A. Ruona, University of Minnesota

Strategic HRD Aligning and HRD Effectiveness
Ida A. M. Wognum, University of Twente, Enschede, The Netherlands
Roel J. Bosker, University of Twente, Enschede, The Netherlands

7 **Innovation and Creativity** — *Salon C*

Chair: Tim Wentling, University of Illinois

Intrapreneurial Programs and Their Impact on Sales, Profit, and Return to Investors
Melissa H. Marcus, Clemson University
Dennis G. Tesolowski, Clemson University
Clinton H. Isbell, Clemson University

The Influence of Curiosity on Various Dimensions of Workplace Job Performance
Thomas G. Reio, Jr., Virginia Polytechnic Institute and State University

Organizational Innovation and HRD: A Critique
Richard J. Torraco, University of Nebraska

Leaders Behaving Badly: How to Block Innovation in Organizations
Darlene F. Russ-Eft, AchieveGlobal

8 **Adult Learning in the Workplace** *Salon EF*

Chair: Margaret Lohman, University of Iowa

Coaching: Facilitating the Training of Subject-Matter Specialist. Development and Evaluation of an Andragogical Model of Continuing Vocational Education

Jost Reischmann, University of Bamberg, Germany

Knowing the Self Through Fantasy and Imagination: Implications for Adult Learning in the Context of Work

John M. Dirkx, Michigan State University

Perceptions Learning Systems in Organizations

Anja J. Doombos, University of Nijmegen, The Netherlands
Suzy J. Holleman, University of Nijmegen, The Netherlands
Ferd J. Van der Krogt, University of Nijmegen, The Netherlands
Ad A. Vermdsi, University of Nijmegen, The Netherlands

9 **HRD Professional Development** *Salon GH*

Chair: Monica Lee, Lancaster University, England

Lifelong Learning and Performance: The Role of Key Qualifications in Human Resource Development

Simone J. van Zolingen, University of Twente, Enschede, The Netherlands
Wim J. Nijhof, University of Twente, Enschede, The Netherlands

Analyzing Career Paths of Corporate University Senior Training Executives

Christopher F. Bober, University of Illinois at Champaign-Urbana

Preparing Tomorrow's HRD Professionals: Perceived Relevance of the 1989 Competency Model

Donna E. Dare, University of Illinois at Urbana-Champaign
James A. Leach, University of Illinois at Urbana-Champaign

Using an On-line Focus Group to Identify Research Issues in Distance Educator/Trainer Development

Margaret L. Bailey, Northern Illinois University
Danilo M. Baylen, Florida Gulf Coast University

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10 **Advances in Qualitative Research** *Salon D*

Chair: Hallie Preskill, University of New Mexico

Case Study and Its Virtuoso Possibilities
Verna J. Willis, Georgia State University
The Promise of Narrative Research in HRD
Ann K. Brooks, University of Texas at Austin
HRD Theory Building Through Qualitative Research
Carol D. Hansen, Georgia State University
Updating the Critical Incident Technique After Forty-Four Years
Andrea D. Ellinger, Pennsylvania State University-Harrisburg
Karen E. Watkins, University of Georgia
A Feminist Approach to HRD Research
Laura L. Bierema, Michigan State University

3:00-3:30 **Refreshment Break** *Salon A*

3:30 - 5:00 PM - CONCURRENT SYMPOSIUM SESSIONS

11 **Work Analysis and Expertise** *Salon B*

Chair: David Antonioni, University of Wisconsin-Madison

Using Performance Analysis for Training in an Organization Implementing ISO-9000 Manufacturing Practices: A Case Study
Dale E. Kunneman, Meridian Technology Center
Catherine M. Sleezer, Oklahoma State University
Building the Credibility of a Training Department: A Case Study
Sharon J. Weisberger, Nissan Motor Acceptance Corporation
Identification, Training, and Certification of Expertise Required of Core Business Processes
Richard A. Swanson, University of Minnesota
Large-Scale Performance-Driven Training Needs Assessment: A Case Study
Elwood F. Holton III, Louisiana State University
Reid A. Bates, Louisiana State University
Sharon S. Naquin, Louisiana State University

12 **Changing Workplace** *Salon GH*

Chair: Kimberly McDonald, Indiana-Purdue University

Globalization, Immigration and Quality of Life Dynamics for Reverse Brain Drains

Ben-Chieh Liu, National Dong Hwa University
Hua-Lien, Taiwan, R.O.C.
Maw Lin Lee, University of Missouri-Columbia

Employee Commitment in Changing Organizations: An Exploration

Wim J. Nijhof, University of Twente, Enschede The Netherlands
Margriet J. de Jong, University of Twente, Enschede, The Netherlands
Gija Beukhof, University of Twente, Enschede, The Netherlands

A Study of Role Conflict, Role Ambiguity and Job Satisfaction in the Georgia Cooperative Extension Service and Implications for Training

Billie J. Chambers, Oklahoma State University
A. B. Moore, University of Georgia
Douglas Bachtel, University of Georgia

Professional Learning on the Job of Dutch Secondary Teachers: Exploring Opportunities for Informal Learning

Kitty H. E. Kwakman, University of Nijmegen, The Netherlands

13 **Special Session: Ethics and Integrity** *Salon D*

Chair: Victoria Marsick, Columbia University

NEW Interactive Panel Discussion: What Position Should AHRD Take in Developing Guidelines for Ethics/Integrity in HRD

Neal E. Chalofsky, George Washington University
Peter J. Dean, University of Tennessee
Michael P. Leimbach, Wilson Learning Research & Development Corp.
Victoria J. Marsick, Teachers College, Columbia University
Fred Otte, Georgia State University
Hallie M. Preskill, University of New Mexico
Steve Rives, Intel
Darlene F. Russ-Eft, AchieveGlobal
Karen E. Watkins, University of Georgia

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FRIDAY, MARCH 6

14 **Performance Evaluation Process** *Salon EF*

Chair: Richard J. Torraco, University of Nebraska

Linking HRD to Agents' Performance in the Insurance Industry
Teresa M. Palmer, Illinois State University
Kenneth J. Crepas, Illinois State University

Assessing the Effectiveness of OJT: A Case Study Approach
Julie Furst-Bowe, University of Wisconsin-Stout
Debra Gates, University of Wisconsin-Stout

Total Quality Metrics: Revision of An Instrument to Measure the Performance Improvement in Teams
Jan Streumer, University of Twente, Enschede, The Netherlands
Ton Hendriks, Polaroid Europe, The Netherlands
Marije Vermeulen, KPMG Consulting, The Netherlands

Technical Training Program Evaluation: Present Practices in the U.S.
Skip Twitchell, Twitchell Consultants
James W. Trott, Jr., Louisiana State University

15 **Change Processes in Organization** *Salon C*

Chair: Peter Kuchinke, University of Illinois

Mid-stream Corrections: Decisions Leaders Make During Organizational Change Processes
David W. Frantz, Purdue University

A Case Study Using a Large Scale Interactive Event to Implement Organizational Change in a Nonprofit Government Organization
Gary N. McLean, University of Minnesota
Dominic G. Kamau, University of Minnesota

Organizational Memory and Scripts: Sources of Resistance to Change or Sources of Lessons from the Past?
Suzanne L. Geigle, George Washington University

Implementing High Performance Work Systems: Planned Change or an Emergent Learning Process
Martha A. Gephart, Columbia University

6:00 ***HRDQ Editorial Board Meeting and Dinner*** *La Grange*

6:00 ***AHRD Global 100 Meeting and Dinner*** *Meet in Hotel Lobby*

DINNER ON YOUR OWN - ENJOY CHICAGO!

SATURDAY, MARCH 7

7:00am to 6:30pm **CONFERENCE CENTRAL, REGISTRATION, AND EXHIBITS OPEN** *West Lobby/ Foyer*

7:00-8:15 **Breakfast Food 'n Thoughts** *Pull up a chair to meet and dialogue with any one of these groups* *Oak Brook*

Book Review: *Performance Improvement Pathfinders: Models for Organizational Learning Systems,* P. J. Dean & D. Ripley, Editors
Facilitators: Richard Herling, University of Minnesota and Peter Dean, University of Tennessee

Book Reviews: *In Action: Leading Organizational Change*, E. F. Holton III, Editor
Facilitator: Dale Kunneman, Oklahoma State University and Elwood F. Holton III, Louisiana State University

Discussion Group: Using Phenomenology to Build Knowledge in HRD
Facilitator: Susan Lynham, University of Minnesota

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Ronald L. Jacobs, Editor

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SATURDAY, MARCH 7

8:30-10:00 **KEYNOTE PRESENTATION** *Salon A*

Dr. Nancy Snyder
Corporate Director, Organization and Leadership Development
Whirlpool Corporation

BUILDING ORGANIZATIONAL EXCELLENCE THROUGH LEARNING

Dr. Snyder will give us an inside look at how a leading corporation is using learning as a strategic performance lever. Functioning as Whirlpool's Chief Learning Officer, Snyder is responsible for setting learning policy for the company worldwide. She will give us insights into how a Fortune 500 company develops their leaders and how they use learning to enhance organizational effectiveness. Dr. Snyder will also discuss her role as a senior executive in a major corporation, charged with developing the company's intellectual capital.

Nancy Snyder was appointed corporate director, organization and leadership development in September 1994. Her responsibilities include developing and implementing training and education for Whirlpool leaders worldwide, organization effectiveness, and management of Brandywine Creek, Whirlpool's Corporate University. Snyder joined Whirlpool in 1988 as manager, human resources. In February 1989, she was promoted to director, strategic human resources, and in July 1989. In 1992 she was promoted to director, organization effectiveness and education. Before joining Whirlpool, Snyder held various human resource positions at Kaiser Aluminum. Snyder holds a bachelor's degree in sociology and masters degree in industrial relations from West Virginia University. She has her doctorate in organization behavior from The George Washington University. Snyder's research interests include global mindset and global organization culture. Whirlpool Corporation is the world's leading manufacturer and marketer of major home appliances. Headquartered in Benton Harbor, Michigan, the company manufactures in 13 countries and markets products under 11 major brand names in about 140 countries.

Moderator: Verna Willis, Georgia State University

10:00-10:30 **Refreshment Break** *Salon A*

10:30 - 12:00 PM - CONCURRENT SYMPOSIUM SESSIONS

16 **Individual Differences in Learning** *Salon EF*

Chair: Val Kosky, University of Scranton

Novice and Expert Learning: Impact on Training
Barbara J. Daley, University of Wisconsin-Milwaukee
Studying Transformational Learning–It Can Be Done!
Sharon Lamm, Lamm Associates, Ltd.
Understanding Learning Climate in Organizations: A Case Study
Mirjam A. A. H. van Moorsel, University of Nijmegen, the Netherlands
Danny Wildemeersch, University of Nijmegen, the Netherlands
An Examination of the Dimensionalities and Theoretical Framework of the Gregoric Style Delineator
Christopher R. Hardy, INNOLOG, Inc.
Albert K. Wiswell, Virginia Polytechnic Institute and State Univ.
Thomas G. Reio, Jr., Virginia Polytechnic Institute and State Univ.

17 **Transfer of Learning** *Salon D*

Chair: Allan Church, W. W. Burke & Association

The Effect of a Mastery Practice Design on Learning and Transfer in Behavior Modeling Training of Supervisory Listening Skills
Gary L. May, Millbrook Distribution Services
Training Transfer as it Relates to the Instructional System and the Broader Work Environment
Constantine Kontoghiorghes, Oakland University
The Organizational Context of Learning and Performance in Four Retail Food Markets
Martha A. Gephart, Columbia University
Development and Validation of a Generalized Learning Transfer Climate Questionnaire: Final Report
Elwood F. Holton III, Louisiana State University
Reid A. Bates, Louisiana State University
Wendy E. A. Ruona, University of Minnesota
Michael Leimbach, Wilson Learning Corporation

18 Action Learning Issues

Salon B

Chair: Paul Brauchle, Illinois State University

Creating a Systemic Framework for the Transfer of Learning from an Action Learning Experience

Suzanne D. Butterfield, Georgia State University
Kitty Gold, Human Resource Developer
Verna J. Willis, Georgia State University

Verifying Themes in Action Learning: Implications for Adult Education and HRD

Verna J. Willis, Georgia State University
Jennifer Deans, DeVry Institute of Technology
Harold Jones, Metropolitan Life

Commitment of Action Learners in an Unfamiliar Setting to Clients, Other Set Members, and the AL Process Itself

Verna J. Willis, Georgia State University
Robert L. Dilworth, Virginia Commonwealth University

Cognitive Frame Phases In An Action Reflection Learning™ Program

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19 HRD in the United Kingdom

Salon C

Chair: Roger Miller, Nottingham Trent University, England

Organization Development in the United Kingdom Public Sector

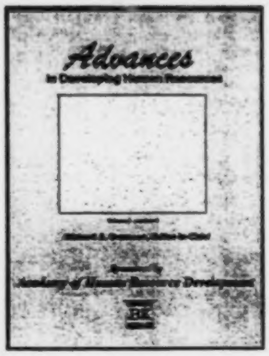
Darren C. Short, Office for National Statistics

Human Resource Development in the UK: A Partial Exposition

Monica M. Lee, Lancaster University, UK

Human Resource Development in the UK- a Review of the Literature

Carole Elliott, Lancaster University, UK



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20 **Technology in HRD** *Salon GH*

Chair: Julie Furst-Bowe, University of Wisconsin-Stout

COBRA, an Electronic Performance Support System for the Analysis of Jobs and Tasks

Theo J. Bastiaens, University of Twente, Enschede, The Netherlands

Perceived Barriers to Learning Over the Internet

James J. Kirk, Western Carolina University
Harold Shoemaker, Indiana State University

E-Mail Mentoring: Boundary Spanning for the Distance Learner

Toni Powell, Barry University
Betty Hubschman, Barry University

An Organizing Scheme for the Uses of Software Technology in HRD

Carson R. Arnett, Louisiana State University

12:00-1:30 **Lunch Food 'n Thoughts** Pull up a chair to meet and dialogue with any one of these groups *Oak Brook*

Book Review: *What Works: Training and Development Practices,* and *What Works: Assessment, Development and Measurement* L. J. Bassi & D. Russ-Eft, Editors

Facilitators: John Porter, Northern Illinois University and Jiping Zhang, Oklahoma State University

Discussion Group: How to Be a Reviewer for HRDQ

Facilitator: Ronald L. Jacobs, Ohio State University and Editor, HRDQ

National Association of Industrial and Technical Teacher Educators (NAITTE) Meeting (open to anyone)

Facilitator: Paul Brauchle, Illinois State University

ASTD Research Committee/AHRD Board Joint Meeting (lunch served) *Elmhurst*

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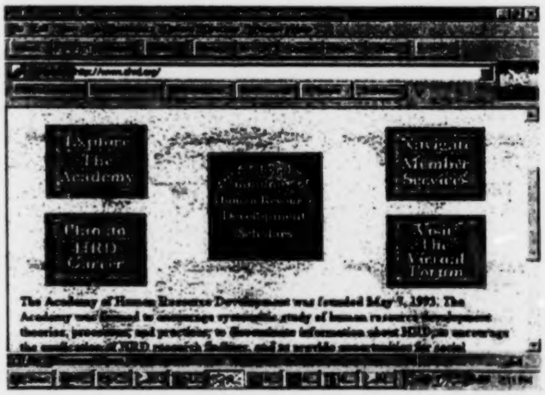

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1:30 - 3:00 PM - CONCURRENT SYMPOSIUM SESSIONS

Salon A

21 **Integrating Learning and Performance** *Salon C*

Chair: Patricia Leitsch, University of Louisville

Action Imperatives That Impact Knowledge Performance and Financial Performance in the Learning Organization: An Exploratory Model

Gary L. Selden, Kennesaw State University
Karen E. Watkins, University of Georgia
Thomas Valentine, University of Georgia
Victoria J. Marsick, Columbia University

The Relationship Between Individual and Collective Learning in the Learning Organization: Its Role and Effect in Defining the Profession of HRD

Sharon J. Confessore, George Washington University
Douglas H. Smith, Florida International University

Human Resource Development's Role in Supporting and Shaping Strategic Organizational Planning

Richard A. Swanson, University of Minnesota
Susan A. Lynham, University of Minnesota
Joanne M. Provo, University of Minnesota
Wendy E. A. Ruona, University of Minnesota

Integrating Learning and Performance Domains in HRD Theory

Elwood F. Holton III, Louisiana State University

22 **Leadership & Executive Development** *Salon EF*

Chair: Reid A. Bates, Louisiana State University

Leadership and Culture: Work-Related Values and Leadership Styles Among U. S. and German Employees

K. Peter Kuchinke, University of Illinois at Urbana-Champaign

Making the Tacit Explicit: Constructing Meaning from Learning Experiences of Senior Managers of Romanian Private Companies in the Transition to a Free-Market Economy

Maria Cseh, Oakland University

Behaviors Related to Perceptions of Leadership in Self-directed Project Groups

Judith A. Kolb, Pennyslvania State University

Never Let Them See You Smile: The Lack of Expressiveness Among Senior Organizational Leaders

Jamie Callahan Fabian, George Washington University

SATURDAY, MARCH 7

23 **AHRD Global 100 Session: Linking HRD Practice and Research** *Salon B*

Chair: Catherine M. Sleezer, Oklahoma State University

This special session will give researchers and the AHRD Global 100, our special group of organizational members committed to research-based practice, an opportunity to strengthen links between research and practice. The session will include identification of current business and HRD imperatives with small group work on those imperatives. Discussion will include relevant research and theory, as well as work that still needs to be done and available resources. Where appropriate, partnerships will be formed between Global 100 members with researchable questions and scholars looking for research opportunities.

24 **HRD Function in Organizations** *Salon GH*

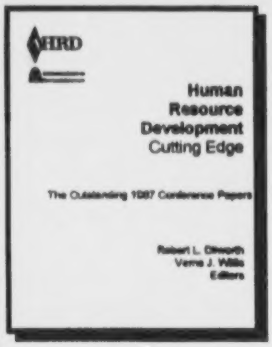
Chair: Baiyin Yang, Auburn University

Comparing Quality Profiles of Training Organizations - A Muli-Level Approach
Martin Mulder, University of Twente, Enschede, The Netherlands

HRD Service-Management Model
Shirine L. Mafi, Ohio State University
Ronald L. Jacobs, Ohio State University

A Phenomenological Study of the Strengths, Weaknesses, Limitations, and Future Trends of Training and Performance Technology
Darlene Van Tiem, University of Michigan-Dearborn

Outsourcing Training: Implications for Internal Human Resource Functions
Lilanthi Ravishankar, AchieveGlobal



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25 **SPECIAL SESSION: Research Forum of Emerging Issues** *Salon D*

NEW

Chair: Peggy Bailey, University of Northern Illinois

Training Older Workers: Implications for HRD Professionals
Jeff Allen, University of North Texas

Should HRD be Taught at a Distance? A Comparison Study of Local and Distant Graduate Student Responses to their Distance Learning Experience
Maria Hruby Moore, Ohio State University
Rosemary McMasters, Ohio State University

Performance Support for Instructional Designers: The Evaluation of a Toolkit for Instructional Design
Ellen Noordkamp-Krabbe, University of Twente, The Netherlands

Discovering Different Voices in Organizational Reality: Use of Non-Traditional Approaches to Understanding Organizational Change Efforts
Margaret D. Gorman, George Washington University

Role of Initial Vocational Training in Company Development
Anders Vind, National Institute of Education Training of Vocational Teachers, Denmark

Defining The Role of Trainers as Internal Consultants in Corporate Universities
Ghalaza Ovacie, University of Illinois

Individual, Group, and Organizational Instructional Systems Development Model
Yong-Kook Joo, University of Minnesota

The Meaning of Group Projects for Pre-Professional, Allied Health University Students
Sally Erickson-Weerts, Mankato State University

Transfer of Customer Service Training: The Influence of Support and Contextual Variables
Marjike Kehrhahn, University of Connecticut

3:00-3:30 ☕ **Refreshment Break** *Salon A*

3:30 - 5:00 PM - CONCURRENT SYMPOSIUM SESSIONS

26 **Professionalizing the Field** *Salon B*

Chair: Robert W. Rowden, Mercer University

Issues in the Professionalization of HRD: Building a Knowledge Base and Credentialing Practitioners

Robert W. Rowden, Mercer University

Professionalization Comes From Theory and Research: The "Why" Instead of the "How-To"

Neal E. Chalofsky, George Washington University

Professionalization and Reflective Theory Building in HRD

Vivian W. Mott, East Carolina University

Credentialing in the Workplace: Human Resource Development Practitioners Should Strive for Certification

Andrea D. Ellinger, Pennsylvania State University-Harrisburg

27 **Enhancing Workgroup Performance** *Salon C*

Chair: Albert Wiswell, Virginia Polytechnic Institute and State University

Formation of Cross-Cultural Global Teams: Making Informed Choices on Team Composition

Robert L. Dilworth, Virginia Commonwealth University

Current Status of Diversity Initiatives in Selected Multinational Corporations

Rose Mary Wentling, University of Illinois
Nilda Palma-Rivas, University of Illinois

An Empirical Study of the Relationship Between Team Process Interventions and Double-Loop Learning

Laurel H. Jeris, University of St. Francis

Goal Condition and Work Group Effectiveness: The Use of Group and Individual Goals for Work Groups Performing Interdependent Tasks

Mary J. Finnegan, University of Nebraska

28 **Core Directions in HRD** *Salon EF*

Chair: Wim Nijhof, University of Twente, Enschede, The Netherlands

Expertise: The Development of an Operational Definition for Human Resource Development

Richard W. Herling, University of Minnesota

A Cross-Disciplinary Critique Of Research With Implications For HRD

Richard J. Torraco, University of Nebraska

Economics of Human Resource Development-Literature Review

Eunsang Cho, Korean Research Institute for Vocational Education and Training

SATURDAY, MARCH 7

29 **Management Assessment** *Salon GH*

Chair: Jan Streumer, University of Twente, Enschede, The Netherlands

The Air Force ROTC Selection System as a Predictor of Leadership
Orlando V. Griego, Colorado State University
George A. Morgan, Colorado State University
Gary D. Geroy, Colorado State University

Moderators of Managerial Behavior Ratings: An Analysis from Multiple Perspectives
Allan H. Church, W. Warner Burke Associates Inc.

A Case Study: Employee Perceptions of the Efficacy of 360 Degree Feedback at a Large Midwestern Utility
Norm Bilsbury, University of Illinois

30 **Advancing the Profession Through Journals** *Salon D*

Chair: Gary McLean, University of Minnesota

The Role of the *Human Resource Development Quarterly* in Shaping the HRD Profession: An Eight and One-Half Year Perspective
Ronald L. Jacobs, Ohio State University

Publishing HRD Research and Theory in *Adult Education Quarterly*
John M. Dirkx, Michigan State University

Creating Clover - *Human Resource Development International* (HRDI)
Monica Lee

Performance Improvement Quarterly (PIQ)
Peter J. Dean, University of Tennessee

ADVANCES in Developing Human Resources: The Academy's New Topical HRD Monograph Series
Richard A. Swanson, University of Minnesota

6:00 **PRESIDENT'S RECEPTION** *Salon BCD*

All registered attendees invited

7:00 - 10:30 **PRESIDENT'S BANQUET AND ACADEMY AWARDS** *Salon A*

All registered attendees invited - Don't miss this enjoyable evening of celebration and fellowship

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SUNDAY, MARCH 8

7:00am to 2:00pm **CONFERENCE CENTRAL, REGISTRATION, AND EXHIBITS OPEN** *West Lobby/ Foyer*

7:00-8:15 **Breakfast Food 'n Thoughts** Pull up a chair to meet and dialogue with any one of these groups *Oak Brook*

Book Review: *Developing Competency to Manage Diversity*, T. Cox & R. L. Beale
Facilitator: John Nelson, Northern Illinois University

Discussion Group: The AHRD Global 100
Facilitator: Catherine M. Sleezer, Oklahoma State University

7:00-8:15 **AHRD Board of Directors Meeting** *Westchester*
(new board members - breakfast served)

8:30 - 10:00 AM - CONCURRENT SYMPOSIUM SESSIONS

31 **Cultural Concerns** *Salon EF*
Chair: Kevin Quinlan, University of Regina
Race, Gender, and Mentoring Patterns
Linda M. Hite, Indiana University-Purdue University
Impatriation Via a Not-for-Profit Organization: An Interpretive Study of the Cultural Adjustment of International Catholic Priests and Sisters to Living in the Upper Midwest United States and the Role of the Organization
Jean R. McFarland, University of St. Thomas
Constructing Diverse Workplace Communities: Using an Educational Attrition Model to Retain Managerial Employees of Color and Women
Shari L. Peterson, University of Minnesota
A Conceptual Framework of Learning for Native American Adult Learners
Steven R. Aragon, University of Illinois at Urbana-Champaign

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32 Expanded Roles for HRD

Salon B

Chair: Valeria Stokes, ACCO Corporation

The Role of Human Resource Development in Corporate Social Responsiveness: A Critical Review

Tim Hatcher, University of Arkansas

The Roles of Consultants in Gainsharing Firms: Empirical Results

Eunsang Cho, Korean Research for Vocational Education and Training
Gary N. McLean, University of Minnesota

The Corporate University: An Initial Study

Tim L. Wentling, University of Illinois
Libin Wang, Uiversity of Illinois
Ghazala Ovaice, University of Illinois
Christopher Bober, Hyatt Hotels
Amanda Schulze, Arthur Andersen

Guiding Principles of Workforce Development

Reid A. Bates, Louisiana State University

33 Management Development

Salon D

Chair: Martin Mulder, University of Twente

The Effect of Supervisor/Subordinate Relationship on Subordinate Performance, Role Ambiguity and Conflict, and Job Satisfaction

Michael J. Nocera, Pennsylvania State University
Judith A. Kolb, Pennsylvania State Unversity

A Pilot Study of Career Development Issues of African-American Women Serving as First-line Supervisors

Michele E. Cushnie, Ohio State University

Human Resource Development Professionals' Perceptions of Reasons for Downsizing and Training Strategies Developed for Middle Managers

Willard Wright, Caterpillar, Inc.
John Niemi, Northern Illinois University

Perceived Leadership Style and Individual Differences as Predictors of Subordinate Information Seeking Behavior

Svjetlana Madzar, Gustavus Adolphus College

34 Discipline of HRD

Salon C

Chair: Richard A. Swanson, University of Minnesota

The Discipline of Human Resource Development

Richard A. Swanson, University of Minnesota

Systems Theory as a Foundation for HRD

Wendy E. A. Ruona, University of Minnesota

Psychology and the Discipline of HRD--Contributions and Limitations

Elwood F. Holton III, Louisiana State University

Economics-Human Capital Theory and Human Resource Development

Richard J. Torraco, University of Nebraska

35 **On-the-Job Learning** *Salon GH*

Chair: Paul Brauchle, Illinois State University

Effectiveness of On-the-Job Training

Marcel R. van der Klink, University of Twente, Enschede, The Netherlands

Finding Their Own Way: Informal Learning and Public School Teachers

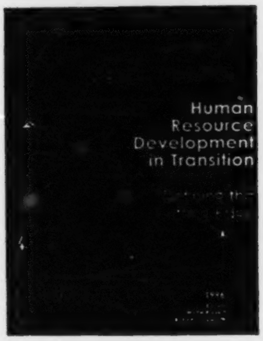
Margaret C. Lohman, University of Iowa

Nicholas H. Woolf, University of Iowa

Learning from Experience: The Professional Practical Knowledge of Female Leaders in HRD

Ruth Schmidle Lavin, University of Nebraska-Lincoln

10:00-10:30 ☕ **Refreshment Break**



**HRD IN TRANSITION:
DEFINING THE CUTTING EDGE**

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Hallie Preskill & Robert L. Dilworth, Editors

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SUNDAY, MARCH 8

10:30-
12:00

KEYNOTE PRESENTATION

Dr. Dorothy Marcic, Vanderbilt University

Salon A

Manging Through the Wisdom of Love

How would the workplace change if we acknowledged that spiritual values are as important in the operations of organizations as they are in the lives of the people who work there? Dr. Marcic convincingly shows that love, justice, dignity, and respect are more than just traditional spiritual ideas: they are also the new management values needed in the contemporary workplace. Marcic presents concrete evidence–taken from real world examples–that breaking spiritual laws, in business as elsewhere, elicits predictable results. She speaks directly to managers who are trying to figure out why their elaborately planned programs don't work, why morale is low or trust is absent, and why worker motivation isn't what it ought to be.

Dr. Dorothy Marcic is a professor at Vanderbilt University and has recently returned from living in Prague for four years. She was a Fulbright Scholar at the University of Econ-Prague and the Czech Management Center, where she taught MBA students and practicing managers. She is the author of *Managing Through the Wisdom of Love: Uncovering Virtue in People and Organizations* (Jossey-Bass) which was recently named one of the top ten business books of 1997. She is also the author of *Organizational Behavior and Management International* (West Publishing), *Women and Men in Organizations* (George Washington University Press), and a book on high performance in the service industry. She has conducted over 400 seminars on many topics and consulted with organizations such as AT&T Bell Labs, United Parcel Service, US Air Force, Hallmark Corp., the US Department of State, and the Czech Ministry of Finance. She has also spearheaded projects with two arts organizations and an Indian tribe in Arizona.

Moderator: K.Peter Kuchinke, University of Illinois

12:00-
1:00 **AHRD Business Meeting - all Academy members please attend!** *Salon A*

1:00-
2:00 **AHRD Board of Directors Meeting** *Salon EF*
(new board - lunch served)

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Developing a Distance Learning HRD Baccalaureate Degree for Working Adults

Barbara E. Hinton
University of Arkansas

This paper documents the planning processes for a distance learning baccalaureate HRD degree option. Topics covered include needs assessment, program/curricula design and development, partnership and articulation development, marketing and recruitment, staffing and scheduling, and evaluation. The ten-step distance-learning model focuses on an HRD program option utilizing delivery through a combination of weekend scheduling, extensive experiential credit recognition, interactive compressed-video delivery utilizing multi-site locations, and articulation between two-year and four-year institutions.

What should an administrator know and do when developing an HRD-focused distance learning baccalaureate degree program to successfully meet the needs of working adults across a widely dispersed geographic area? What is the process for developing such a program and administering the myriad of details associated with such a program? What are the issues that must be addressed if such a program is to be a success? How can an administrator avoid fatal pitfalls and remain sane?

Theoretical Framework

Today's workplace is rapidly changing, requiring ". . . workers to have both the communication and interpersonal skills necessary to interact effectively with customers and the adaptability and influencing skills necessary to direct the organization to the customers' demands" (Carnevale, 1991, p. 147). "No factor is of greater significance than education in determining success in today's (and tomorrow's) advanced technology workplace ." (Hay, 1993). As we have continued to recognize the revolutionary changes in America's workplace in the past few years, it is evident that the autocratic management system of the past is being replaced by autonomous work teams, that the workforce is becoming more and more diverse, and that technology permeates even the most labor intensive jobs. Today's workforce must be more flexible and better educated; however, in today's economy, they need access to education and training while maintaining their full time work schedules. Competencies required by today's workforce have been documented by many organizations including the American Society for Training & Development (ASTD) and the Secretary's Commission on Achieving Necessary Skills (SCANS). In 1995, (National Center for Education Statistics, 1997), 38.6 per cent of all full-time employed individuals who had some post secondary education, but were not college graduates, took one or more courses during the previous 12 months to improve their job skills. This is a decrease from 39.3 per cent who did so in 1991. There has not been an increase among this group of workers in skill improvement education and training, despite the increased emphasis nationally on identification of skills and competencies needed by today's full-time workers.

Although 60 percent of adult students are degree seekers according to the College Board (Dubois, 1996), until recently very few colleges offered adult learners the opportunity to complete an entire degree at-a-distance. Dubois contends that those institutions of higher learning which

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make the paradigm shift from traditional higher education delivery to delivery of programs which transcend geographic boundaries, are time and place independent, and respond to the educational needs of the working adults will be the ones which will prosper. Distance learning must emphasize "quality education that is inclusive, available, attainable, and learner-centered."

"Distance learning, with a history of serving remote learners, is emerging as part of mainstream education and training efforts to provide flexibility of time, space, and selection to learners." (American Council on Education, 1997). ACE describes the five principles important to distance learning as follows: Learning Design—activities designed to fit the specific context for learning; Learner Support—opportunities effectively supported for learners through fully accessible modes of delivery and resources; Organizational Commitment—initiatives backed by a commitment to quality and effectiveness; Learning Outcomes—programs guided by demonstrable learning outcomes; and Technology—provider has a plan and infrastructure for using technology to support its learning goals and activities.

Research Questions

The need for a flexible program that is responsive to the needs of working adults has been well documented in the literature (Scott, 1993; Dillman, 1995; Scholossbert, N, Lynch, A. & Chickering, A., 1989; Thorson, M., 1996; Merriam, S. & Caffarella, R., 1991). Yet there has not been a step-by-step model suggested to guide the process for developing such a program, especially one which combines distance education delivery with weekend scheduling, experiential credit, work site internships, articulation with 2-year institutions, and HRD topic centered curriculum. The addition of any one of these elements to a traditionally designed baccalaureate degree makes the program development process increasingly complex; combining them all can be overwhelming.

What, then, are the key issues involved in developing a distance learning, HRD-focused, baccalaureate degree for the working adult? What steps should an administrator take in developing such a program?

Methodology

The paper examines the steps involved in developing a distance learning baccalaureate degree for working adults. A model presented integrates research from the literature and the experiences of the author in developing such a degree program at the University of Arkansas. In fall 1996, the Department of Vocational and Adult Education (VAED) launched an innovative program—a distance learning undergraduate program option in HRD. A second cohort was added at four additional sites in fall 1997. Prior to this, the University had never offered an outreach undergraduate degree option. The procedures used in developing the program and key issues addressed in each step of the development process are presented in this paper. The model used consisted of ten steps.

Step One—Needs Assessment The statewide needs assessment was conducted in two phases. In phase one, forty-two self-identified HR professionals were interviewed by telephone by the researcher, using a structured open-ended (OE) and closed-ended (CE) interview guide. All forty-two interviewees were members of statewide professional HR organizations. The purpose of the interviews was to identify what HR practitioners in Arkansas perceived as the competencies required for successful performance in their field. The OE/CE interview guide was based upon previous research conducted by the University Division of Continuing Education. Results of the interviews were transcribed, coded, and grouped into content areas or categories. Phase two involved a state-wide survey of 464 HR professionals representing service, manufacturing, government/public, and educational organizations. The survey instrument was a modification of the HRD competencies identified by McLagan (1989) and was quite long. There was a return of 69 usable surveys. Although the return rate was small (6.7%), the results were revealing.

Results. Interview results identified the following six content areas being of high interest: Communication, Legislative Issues, Health/Safety, Teams/Groups, Worker's Compensation, and Employee Review. Percent of respondents mentioning these areas ranged from 89% mentioning Communication to 54% noting Employee Review. When asked if they had an interest in a certification or degree program, 65% indicated "yes", 29% said "possibly" and 6% said "no". Reasons most often cited for negative responses to professional development activities were "time away from job, location of programs, lack of program information, and lack of manager support". Incentives mentioned as motivating potential participation included "organizational tuition reimbursement, degree completion, and desire for professional growth". Percentages of respondents performing specific job responsibilities are described in Table 1.

Table 1
Percentage of respondents performing given job responsibilities

Training/Facilitating	78.7%
Managing Training	54.5%
Organizational Development	48.4%
Program Evaluation	42.4%
Career Development	40.9%
Research	22.7%
Sales & Marketing	18.1%
Other	56.0%

Step Two—Degree Design A vocational education degree option entitled Industrial Trainer was already in place. The degree option had only had never been a popular one for traditional undergraduates, and it was not readily accessible to working adults, given that it required a full four-year on-campus residence. The faculty felt that the timing was right to revise the option. Based upon the results of the needs assessment, a faculty task force designed the degree to meet several criteria. It should provide the competencies that were identified in the needs assessment, recognize prior experiential learning, and enable the student to complete the degree while remaining in a full-time job without relocating. The faculty was clear that the degree should retain academic rigor while accommodating the needs of a special population of under served adults.

Results. The 125-hour degree was designed to articulate with two-year 56-hour associate degrees which can be obtained through the state's community college system. The average working adult can complete the associate degree at a community college within a 30-mile radius of his/her home. The last two years of the degree were designed with 69 hours of technical courses to include a 24-hour HRD block, 12 hours of internships, and up to 33 hours of experiential credit to be earned through portfolio development documenting prior learning and/or work experience.

Step Three—Curriculum Design In the needs assessment phase, respondents ranked the top competencies they currently needed as presentation skills, coaching skills, organizational behavior understanding, negotiation skills, adult learning understanding, computer competence, industry understanding, project management skills, and visioning skills. Those they will need in the future were identified as relationship building skills, negotiation skills, coaching skills, project management skills, computer competence, electronic systems skills, industry understanding and intellectual versatility.

Results. These skills were key to curriculum design. Eight 3-hour HRD courses were developed around competencies within these skill areas. The 12-hour internship was designed to provide students an opportunity to apply these competencies in a work-related setting. In addition, CAEL guidelines were adapted to provide structure in portfolio development to documenting past experiential learning.

Step Four—Delivery System Design The Department of Vocational and Adult Education had been a leader within the College of Education and Health Professions in providing graduate level distance education classes during the past six years. However, there had never been an undergraduate program offered via distance education at the University. The faculty felt that the intended audience for the degree option was ideal for distance education delivery; i.e. the targeted students were highly motivated adults with at least five years of work experience and who were currently employed full time. The College had a compressed-video studio, another studio was available nearby, and there was a statewide compressed video system available. It was seen as essential that the distance learning delivery system be utilized if the intended audience was to be reached.

Results. The agreed upon design was to delivery the 69 technical hours of the degree as follows: The 24-hour HRD course block would be delivered via interactive, compressed video to at least three remote sites over a two-year period. Students would be admitted as a cohort at the start of the 2-year rotation. Two HRD courses would be delivered each semester via distance learning technology. The internship and portfolio credit would be earned by arrangement and supervised by VAED faculty. The general studies requirement would be met by the students completing those requirements at any two-year or four-year college of their choice, provided the credits met the University of Arkansas transfer policies.

Step Five—Program Approval The program approval process was facilitated by two important factors. First, since this was a program option modification, not a new program, we did not have to go through a complete new program justification procedure. (This was fortunate since in this time of limited resources, it is very difficult to get a new program approved, especially one which was as ground-breaking as this one.) However, program modification did have to be approved from the department, college and university levels through the University of Arkansas' Board of Trustees. The Department of Higher Education Coordinating Board had to approve host sites. Secondly, the documented needs assessment and sound degree and curriculum design were not difficult to defend.

Results. While it took a full academic year, many meetings, and much patience on the part of the department head, the approval process was relatively painless. A sound program meeting the needs of under-represented working adults was not difficult to defend.

Step Six—Partnership Development In order to deliver the program at remote sites, it was essential that close partnerships be developed and maintained with the host institutions. It was essential that both the host institution and the University feel that the partnerships were a "win-win" situation. Issues which had to be addressed included location of host sites who had the necessary technology for distance learning, who would invite us into their delivery area and were open to building a partnership, and who would support our presence on their campus through use of their facilities.

Results. For the first cohort in fall 1996, we identified an originating site near the University of Arkansas and three potential remote sites. We made initial phone calls to the presidents of those institutions, provided an overview of the proposed partnership, and inquired of their potential interest. All agreed to meet with us to learn more about the potential partnerships. A team consisting of an associate dean of the college, the department head, and a faculty member made courtesy visits to the three two-year institutions. After outlining our program, describing how the host institution could benefit, and how could we partner in delivering the degree, the host site administrators agreed to entering into a partnership with us. A formal Memorandum of Understanding (MOU) was then initiated by the University with minor points negotiated between the two institutions. The MOU served as a guiding document, describing the details of the partnership and the responsibilities of each institution. The same process was followed in fall 1997, when the second cohort was launched at four additional sites across the state.

Step Seven—Staffing and Scheduling Because the faculty and staff are the persons who make any program successful, staffing was carefully considered. Criteria for selecting faculty included experience in delivering distance education courses and in working with non-traditional students. In addition, faculty had to be knowledgeable in the subject matter and a proponent of andragogical teaching methodology. Staff had to be identified at the host site to assist with registration and other essential support services. Scheduling, registration and fee payments had to be coordinated between the University and host institutions.

Results. Four self-selected faculty members formed the instructional team. From the start, the faculty worked together in planning and delivering all instructional activities. The team meets several times during each semester to discuss issues and make plans. The faculty divided the various administrative details with one faculty assuming lead responsibility for advisement, another overseeing interns, and another assuming primary responsibility for portfolio development. While all the team assists in the various tasks involved, it worked well for one person to take primary responsibility for a given area. The Division of Continuing Education provides coordination for all distance learning delivery for the University. Their staff has worked diligently each semester to coordinate student admissions, class scheduling, registration, and fee collection. They also maintain a staff at two of the host institutions. At the other institutions, the host designated a person as a point-of-contact for the program. The University's Office of Financial Aid has cooperated fully in providing financial aid application assistance to students at distant sites. Respondents to the initial needs survey identified one day per week and weekends as their top preference for scheduling. This information, along with additional information gained during the needs assessment phase were key to designing the program. As a result, the decision was to offer two courses each semester over the two-year cohort period. One course meets on Friday evenings, 4:30 p.m.-9:30 p.m.; the second meets on Saturdays, 8:00 a.m.-1:00 p.m. the first nine weeks of each fall and spring semesters. An informal evaluation at the end of the first semester confirmed that this is the scheduled preferred by these students. Therefore, the same schedule has continued with year two. Each faculty member originated the class at the remote sites at least once during each nine-week semester. In addition, during each semester all the students meet together at a central location one weekend. The College has an overload reimbursement policy that provides overload pay for faculty teaching via distance education. This provides some compensation to faculty for the extra work involved in teaching large classes via technology.

Step Eight—Marketing and Recruitment Early in the development of the program, administrators expressed doubt that the program would be cost effective. The University agreed to allow the program to be delivered with the understanding that it would have to be self supporting. There was some concern early on as to "who would take the financial risks". Therefore, there was a great deal of pressure to market the program successfully.

Results. Fears of risks were very unrealistic. Marketing has been minimal with only two newspaper ads run at each host site. Two faculty members have spoken at professional organizations concerning the program. Letters and flyers were sent business and industry HR personnel. Response has been instant and excellent with 73 students in the two cohorts at eight sites across the state. Recruitment for the third cohort is currently ongoing, with posters located at industries and newspaper ads announcing the next cohort. An enrollment packet containing guidelines for admission to the program and the University, program requirements, and application forms are distributed by the Department as well as by the host institutions.

Step Nine—Program Delivery There are many details involved with delivering a distance learning program of this type. Faculty coordination, student registration, class scheduling, etc. have been discussed above. However, the mechanics of delivering instruction via technology require assistance of a knowledgeable technician. Details have to be coordinated concerning line charges, equipment usage, host site technical assistance, and scheduling with the service provider.

Results. The technician at the College has provided outstanding assistance. He is knowledgeable about the capabilities of the technology systems at each institution, understands the politics of working with institutions governed under different boards, and knows the technicians at the host sites as well as at the provider site. With his coordination, the program has experienced few problems and down time has been held to a minimum.

Step Ten—Program Evaluation We knew early in the program that program evaluation was as important as needs assessment and that the cycle would not be complete without each. The team wanted evaluation to be both formative and summative. We believed that all aspects of the program must be constantly evaluated, monitored, and changed when needed. Therefore, a grant proposal to the Fund for the Improvement for Postsecondary Education (FIPSE) was submitted in fall 1996.

Results. The FIPSE grant proposal was funded, and the program will be evaluated through 2000. Both quantitative and qualitative data are being gathered around four issues: student access, student success, systems effectiveness, and program dissemination. Initial data are being analyzed and will be reported in the future.

Conclusions

The model (Figure 1) presented in this paper documents the program planning processes of a distance learning degree option from the needs assessment stage through the program design, approval, and delivery stages, and concludes with the evaluation stage. Topics covered include program/curricula design and development, partnership/articulation development, marketing/recruitment, staffing/scheduling, and non-traditional delivery systems. As a result of application of the model to the development and delivery of a distance learning degree over the past two years, it is apparent that such a program can be successfully delivered to meet the needs of working adults. However, it is equally apparent that many details must be attended to prior to program delivery. Lessons learned confirm that needs assessment, careful program planning, involvement of key stakeholders in the process, and continuous communication among the stakeholders are essential components of a successful program. Quantitative and qualitative program evaluation will be conducted during the next two years.

How Research Contributes to New Knowledge in HRD

While the paper is based upon a sound theoretical framework, its emphasis is on process. The implementation of this model at the University of Arkansas, Department of Vocational and Adult Education, has resulted in delivery of such a program at eight sites across the State, with current enrollment of 73 working adults.

The paper contributes to new knowledge in HRD in that the program combines elements previously unused *in combination*. While there have been previous distance learning programs delivered by technology, recognition of prior work experience and learning, weekend scheduling, required internships, or articulation between 2-year and 4-year institutions, to our knowledge, this is the first HRD program which combines *all* of these elements. The *process* for developing the program, gaining institutional approval, developing partnerships, and managing the many details leading to program delivery and evaluation is a tedious and arduous one, filled with many pitfalls which can lead to failure. This paper suggests ways to avoid those pitfalls. Information contained in this paper will assist an administrator seeking to duplicate a program of this type.

References

American Council on Education, (1997). Guiding principles for distance learning in a learning society. Washington, DC: The Center for Adult Learning and Educational Credentials.

Aslanian, C. (1996). Assessing demand for special program options. Paper presented at Marketing and Delivering Special Program Options to Adult Students Conference, Orlando, FL: The College Board.

Carnevale, A. (1991). America and the new economy. San Francisco, CA: Jossey-Bass.

Dillman, D. (1995). What the public wants from higher education: workforce implications from 1995 national survey. Social & Economic Sciences Research Center. Pullman, WA: Washington State University.

Dubois, J. (1996). Creating distance learning options at your institution. Paper presented at Marketing and Delivering Special Program Options to Adult Students Conference, Orlando, FL: The College Board.

Dubois, J. (1996). Distance learning: A transformation model for higher education. Paper presented at Marketing and Delivering Special Program Options to Adult Students Conference, Orlando, FL: The College Board.

Foster, K.. (1996). Marketing strategies. Paper presented at Marketing and Delivering Special Program Options to Adult Students Conference, Orlando, FL:, The College Board.

Harris, S. (1996). Delivering effective weekend college programs. Paper presented at Marketing and Delivering Special Program Options to Adult Students Conference, Orlando, FL:, The College Board.

Hay, G. (1993). Effective marketing to adult students. A Step-by-Step Approach to Marketing: How to Increase Adult Student Enrollment, Washington, DC: The College Board.

Husson, W. (1996). Developing accelerated programs for adult learners. Paper presented at Marketing and Delivering Special Program Options to Adult Students Conference, Orlando, FL:, The College Board.

Husson, W. (1996). Managing and marketing accelerated programs. Paper presented at Marketing and Delivering Special Program Options to Adult Students Conference, Orlando, FL:, The College Board.

McLagan, P. (1989). Models for HRD practice. Alexandria, VA: American Society for Training and Development, Alexandria, VA.

Merriam, S. & Caffarella, R. (1991). Learning in adulthood: a comprehensive guide. San Francisco, CA: Jossey-Bass.

National Center for Eduction Statistics (September 1997). Skill improvement training among currently employed workers. Washington, DC: Office of Educational Research and Improvement, U.S. Department of Education.

Ringquist, D. (1996). Making weekend college programs successful. Paper presented at Marketing and Delivering Special Program Options to Adult Students Conference, Orlando, FL:, The College Board.

Schlossberg, N., Lynch, A., & Chickering, A. (1989). Improving higher education environments for adults. San Francisco, CA: Jossey-Bass.

Smith, L. (1996). Redesign and reposition: The two core strategies for success in marketing to adult learners. Paper presented at Marketing and Delivering Special Program Options to Adult Students Conference, Orlando, FL:, The College Board.

Thorson, M. (1996). Campus-free college degrees. Holbrook, MA: Adams Media Corporation.

An Evaluation of Distance Learning in the University of Minnesota Human Resource Development Program

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The University of Minnesota's Human Resource Development Distance Learning Project is now in the final year of a three-year funding cycle. This paper evaluates the project, measuring its success from the viewpoint of students, faculty, and project administration. Suggestions are made to shape the Project's strategies for the next three to five years and add this project's experiences to the emerging literature on the effective uses of distance learning technology using electronic media.

The Human Resource Development Distance Learning Project of the University of Minnesota is a pilot project to experiment with emerging technologies that allow students and faculty to interact across time and distance. It is funded by the College of Education and Human Development, University College/ Continuing Education and Extension, and Minnesota Extension System. Established in Spring, 1995, the Project's activities have included classes offered via interactive television (ITV) and the Internet. ITV classes are broadcast from the St. Paul campus to U of M sites in Morris, Crookston, and Rochester, MN. Students may earn an M.Ed. degree entirely through distance learning, with the exception of one required course associated with the annual conference of the Academy of Human Resource Development (AHRD), Emerging Research in HRD. This course was designed to provide distance learning students with in-person contact with at least one senior professor, other students, and professionals in HRD. The first graduates of this program completed their degrees in Spring, 1997. In total, 131 different students have taken at least one class using some form of distance learning.

For the first two years of the pilot project, the only Internet course offered was "Training on the Internet," taught from the Pennsylvania State University by Dr. David Passmore, under contract with the University of Minnesota. This course makes sophisticated use of the tools available for web design and Internet training delivery. In the third year, six additional courses (all 1 and 2 credits) were offered via Internet by University of Minnesota faculty.

Faculty for the ITV courses were drawn from regular University of Minnesota faculty and instructors. Usually one course per quarter from among the regular HRD/Adult Education offerings has been selected for ITV broadcast. Offerings were selected so students at the remote sites would be able to complete the necessary classes to complete an M.Ed. degree.

Problem Statement

Distance learning using electronic media is a technology that is generating great interest in the HRD field. It offers the promise of bringing together students and instructors across physical boundaries when a traditional classroom experience would not be feasible. Additionally, many look for lowered costs due to decreased travel. However, distance learning's effective use makes particular demands on the instructor/curriculum designer, on the student, and on the administration, which may differ greatly from the expected and well-known demands of the ubiquitous classroom experience. Moreover, student and faculty satisfaction with the distance learning experience may be affected by long acquaintance with and

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preference for face-to-face classroom interaction. Factors that affect faculty and student satisfaction with the learning experience are of special interest in this evaluation. Specific administrative costs and challenges are associated with distance learning, not the least of which is making sure all students and faculty have access to adequate and compatible equipment. Obtaining the needed equipment can make distance learning prohibitively expensive.

Finally, instruction via distance learning must be cost effective in order to be a viable alternative to classroom instruction. Marketing may need to be conducted differently in order to attract students who may be interested in seeking instruction through alternative methods. These students may not be aware that classes suitable to their needs are available and would not think to look for them in university catalogues. Candidates for instruction via distance learning include those who live too far from the university to attend classes and professionals and others whose business or personal schedules make regular classroom attendance difficult or impossible.

Review of Literature

This literature review focuses on the distance learning experience, itself, using electronic media and the cost-effectiveness of its use.

The Distance Learning Experience While distance learning (DL) has its roots in correspondence education, there are additional issues for distance learning when electronic technologies are incorporated into its implementation. These issues are related to the structure of the learning experience, its content, the environment used to deliver the learning experience, and how the experience is administered (Kelly, 1990). These, in turn, influence the level of learning and attitudes toward the learning experience by the students, instructors, and the institution.

Like other vehicles for delivering education, the structure of instruction via distance learning must incorporate appropriate instructional events for the type of learning which is to be attained (Winn, 1990). These events include use of behavioral models and learning environments which support cognitive development. The use of a specific model should be determined by the instructional goals of the program (Bell & Davis, 1995, 1996), including the teaching of critical thinking skills (Newman, Johnson, Webb, & Cochrane, 1997) and group participation skills (Phillips, Santoro, & Kuehn, 1989).

Learning can be related to the degree to which any two-way communication transaction between instructor and student or among students takes place as part of the educational process in any learning environment (Shale & Garrison, 1990). Because distance learning takes place with a spatial or chronological separation between instructor and student and among students, technology is used to facilitate the two-way communication process. McIssac and Gunawardena (1996) cited the constructs of transactional distance and level of interaction as being important to effective communication.

The implementation support structure for distance learning "can be enormous" (Oblinger & Maruyama, 1996). In addition to development of the content and materials, support includes installation and operation of the technology delivery system, changes to the organization, and the responsibility for universal access. Technology for distance learning often includes instructional television networks and wide-area and local-area computer networks, including computer-mediated communication (Romiszowski & Mason, 1996). Kelly (1990) categorized these issues into planning, course preparation, and ongoing support. In addition to planning, preparing, and maintaining the technology infrastructure, organizational infrastructure changes include processes for planning and approving the courses and administering such student services as registration, communication, monitoring progress, and resolving problems. Often there is resistance or inability of institutional members to make the changes necessary for effective delivery of learning (Miller, 1997; Oblinger & Maruyama, 1996). The degree to which learning takes place and students' administrative needs are addressed relates to the students' attitudes toward the learning experience. The attitude of organization members toward distance learning may also affect student attitude. While media are used to present instructional messages that change attitudes, the media themselves can change attitude as well (Simonson & Maushak, 1996)

Distance learning in North America tends to be delivered by universities. According to Bates (1995), these universities tend to be committed to the assumption that traditional "group, face-to-face instruction is the preferred and most effective form of higher education...and that the closer distance education can directly imitate this, the more effective distance education will be" (p. 167). Distance learning technologies tend to be chosen and used to deliver classes rather than to create flexible learning opportunities. For this reason, use of distance learning in the U.S. has been less flexible and innovative in serving the needs of students than it has been in Europe and Asia.

Cost Effectiveness of Distance Learning Bates (1995) outlined general fixed and variable cost structures that can be expected using various forms of distance learning. Specific costs will vary based on specific situations. In general, interactive television tends to cost far more per student study hour than any other form of distance education. Both fixed production and equipment costs and variable transmission and labor costs tend to be high. Our own ITV classes demonstrated this; interactive television broadcasts to two distant sites required an instructor, two teaching assistants, three technicians, and three rooms full of sophisticated broadcast equipment. For the Internet courses, our students provided their own computers and Internet service, raising issues of access for those who may not be able to afford the equipment.

In summary, the evaluation of a distance learning project should focus on student learning, student attitudes toward the learning experience, faculty attitudes toward the experience, degree of institutionalization of distance learning delivery, the level of support required to implement distance learning, and cost effectiveness of the instruction relative to its goals.

Research Questions

The following questions were addressed in the evaluation components reported in this paper.

1. How satisfied are faculty, students, and project administrators with the distance learning experience?
2. Do students think they learn the class content effectively using the new technology? What factors enhance learning?

Methodology

A survey of students and interviews with instructors, project administrators, and an ITV on-site coordinator were used to answer the research questions.

Student Survey Based on the literature and the research questions, the survey was constructed in four sections of close-ended questions: Content of Courses (7 questions), Delivery Method (11 questions plus an additional 6 questions for Internet users), Administration (7 questions), and Overall Satisfaction (2 new questions plus the three "overall" questions from the previous three sections). The ratings provided a 5-point Likert scale of agreement ranging from "strongly disagree" to "strongly agree." An open-ended section provided respondents with the opportunity to provide unstructured feedback. The questionnaire was reviewed by two administrators from the program, a student who had been enrolled in distance learning, and two faculty members who had taught at least one of the classes, and revisions were made.

Survey Administration and Return Rate. All students (131) who were enrolled for one or more of the distance learning courses were mailed a questionnaire. Students who were part of an ITV class at the broadcast site (on the St. Paul campus) were not included in the survey because their experience was functionally identical to a regular classroom experience. Two weeks after distributing the questionnaire, a telephone call was made to all non-respondents requesting their participation. Subjects with no telephone number on file or who requested another copy received a second questionnaire.

Seven surveys were returned as undeliverable, and 51 useable returns were received, for a return rate of 42%. This might have been increased if 1) it had been possible to make more than one reminder contact, 2) there had not been a Canadian mail strike, and 3) current addresses for all students had been on file. The Human Subjects Committee at the University of Minnesota would not approve more than one followup request. Of the 51 returns, 18 students had taken an ITV course, 22 had taken an Internet course, and 11 had taken at least one of each. Two entries were made in the data matrix for these 11 respondents, one for their rating of the ITV course(s), and one for their rating of the Internet course(s). Thus, the analyses reported here are based on course ratings rather than individual returns. The final n for this analysis was thus 29 ratings of ITV courses and 33 ratings of Internet courses (for a total n of 62).

Survey Reliability. Reliability was determined by calculating Cronbach's alphas on the returned surveys. The reliabilities thus calculated, by section, were .84 for Content, .92 for Delivery Method, .71 for Administration, and .83 for Overall Satisfaction. These reliabilities range from acceptable to high (Rosenthal & Rosenow, 1991).

Interviews. Five of the 14 instructors involved in the Project were interviewed by telephone. The remaining instructors were not available during the interview period, but attempts will continue to be made to include them in a final report. An unstructured interview guide was developed; the intent was to have the faculty share their feelings and observations about their experiences with the Project. Four administrators involved with the Distance Learning Project and one ITV on-site coordinator were also interviewed. Two of the researchers reviewed the transcripts to identify themes that emerged from the interviews.

Results from the Student Survey

The means of the four sections ranged from mildly (3.86) to strongly (4.26) positive. Respondents thought most highly about the content of the courses, followed closely by their overall opinion of the courses. A small gap appears between these ratings and the ratings of delivery method and administration. However, even these sections produced positive opinions. Table 1 shows the means and standard deviations for the four sections. Paired t-tests (59 to 61 df) revealed no difference in the means for delivery method and administration and in the means for content and overall satisfaction ($p < .05$).

Table 1
Means and Standard Deviations for Four Survey Sections

Survey Section	Mean	sd
Content	4.26	0.68
Delivery Method	3.86	0.84
Administration	3.92	0.73
Overall Satisfaction	4.23	0.88

Comparing ITV and Internet Classes There were few differences in students' ratings based on method of delivery (ITV vs. Internet). Respondents did think the ITV courses had better administration (M=4.11) than the Internet courses (M=3.73)(t (58)=2.1, p=.04). However, both means still cluster in the upper end of the scale. Again, this is an issue of a difference between moderate and strong praise for the program. It is probably based on students' opinions that information about ITV courses was more available (M=4.48) than for Internet courses (M=3.72) (t (56)=3.46, p=.001). There were no other significant differences in students' opinions based on course delivery method (all p's > .1).

In-depth Look at Internet Several questions were asked specifically of the participants in the Internet classes. Access to technology (both physical access and skill level) remains an issue for a substantial minority of the sample. Ten students (31%) rated themselves at or below the scale midpoint in terms of having adequate physical access to the needed technology for the course (M=3.8, sd=1.39). Respondents' ratings of their skill level prior to the course also shows a bimodal distribution, with 10 people (31%) below the midpoint of that scale (M=3.5, sd=1.46). However, in rating their technology skill levels after taking the course, only 3 students (9.6%) continued to mark themselves below the scale midpoint (M=4.3, sd=1.08). Thus the course provided an opportunity for some students to enhance their skills with the technology. Finally, all but one respondent marked at or above the scale midpoint for the statement, "I enjoyed using the technologies in this course." Thus, though many found the technology challenging, almost all were satisfied with their interaction with it by the time the course was over.

Dissatisfied Customers There were 6 students whose scores on the 5-item "overall satisfaction" composite scale fell below the scale's midpoint (1.5, 1.67, 2.0, 2.25, 2.8, and 2.8). These were evenly split between the ITV courses and the Internet courses. However, all were students who were not in the HRD program. Perhaps being on the outside of the formal communication channels of the HRD program, being in a distant location from the university, and using an experimental program to take a class all conspired together to make their experience less than enjoyable.

Open-ended Responses Most students taking ITV who made comments liked the experience overall. However, when they were critical, they most often focused on poor instructional methods used by some instructors, lack of accessibility to the instructor, the poor performance of some of the ITV technology, and the large size of the classes which limited participation with the overall group. They were most satisfied with the ability to access instruction not otherwise available, the effort by some of the instructors to make sure the course material came through clearly at all locations, and the use of discussion groups, high quality visuals and video resources, and outside speakers.

There were equally as many favorable as unfavorable comments about the Internet courses. The unfavorable comments centered around the inability to access course content because of difficulty with the technology, lack of access to the technology, lack of personal expertise with the technology, and the amount of work that was required. Those who responded favorably felt that the use of the Internet was appropriate for the subject matter, that the courses were well structured, and that the instructor kept in touch to give them feedback and make the course interesting and relevant. Favorable comments also cited the use of many of the communication capabilities of the Internet, such as chat-rooms and video conferencing, access to a number of exemplary sites and resources that were incorporated into the course, and frequent contact with the instructor and other students.

A common underlying theme in favorable comments for both media was the perception of significant amounts of "individualization" of the course. The reverse was true in the unfavorable comments; these students were unable to "connect" with the instructor, the course itself, or other students. Those who seemed pleased found a way to "take responsibility for (my) own learning and became comfortable with the technology."

Themes from Interviews with Instructors, Administrators, and an On-Site Coordinator

A review of the transcripts of the interviews yielded the following themes.

Team Work, Cooperation, and Planning Instructors reported that preparing for DL courses required far more time and attention to detail than preparing for traditional classroom courses. Team work and cooperation among instructors, technical media specialists, and administrators were important attributes of successful course preparation and implementation. Traditional classroom instruction, in contrast, tends to be a solo effort. For DL, course materials and course plans need to be completed well in advance of a specific class session so all team members can fulfill their particular responsibility.

Flexibility On-the-spot flexibility is required when unplanned occurrences interfere with planned activities. The instructor is confronted with such issues when snow prevents students from reaching one of the sites, but students are present at the host site; when the system goes down for an hour in the middle of class; or when faxed materials are lost or the fax machine is down. In some respects, these situations are faced in a traditional class. Overhead projector bulbs burn out, some students are isolated in a snowstorm while others make it, and directions to support staff are misinterpreted. The magnitude of the issues, however, seems larger.

Using DL Technology While offered to all instructors, few of those interviewed took advantage of specific training in using the DL technology. Difficulty with the technology ranged from "annoying" to "show stopping." For ITV courses technical difficulty sometimes caused portions, such as audio, to be missed, and even cancellation of entire class sessions. Noise, including paper rustling and electronic noise, was sometimes a noticeable distraction. This noise, along with forced protocols, such as waiting for a remote site to be recognized, was felt by some to seriously detract from the educational experience.

Technical difficulty in Internet courses was sometimes more subtle and cumulative in effect. According to reports from students to those interviewed, repeated difficulty in gaining computer access to the course(s) caused some students to drop out before completing the course while feeling upset with the technology and the University as an institution. Internet courses that pushed the "technology envelope" were felt to be difficult for many of the students because they did not have enough previous experience to make it work. However, courses that did not make good use of technology were considered boring. The courses cited as most satisfying to students were those that used several levels of technology (e.g., computer video conferencing, on-line delivery of content, reference to on-line resources, chat-rooms, and e-mail) to accommodate the technological ability and access level of the students.

Administration: Performance and Roles The quality of service performed by the distance learning administrators was perceived to be widely variable. All past and current administrators interviewed expressed frustration with the lack of continuity between incumbents and the need to spend an inordinate amount of time finding out "how the system works" with respect to registration, tracking enrollments, disbursing funds, etc. It appears that clear operating procedures were difficult to establish within the existing University bureaucracy, difficult to document because distance learning required so many exceptions to established University procedures, and difficult to maintain because of high turnover in the DL administrator position, in one case due to an improved employment opportunity and in two cases due to performance deficiencies.

The Distance Learning administrators tended to occupy the position for one year. On two occasions the position has been split between two people. The duties of the position tend to cover a broad and ill-defined range that has included administration, coordination among the personnel and sites, technology troubleshooting, student communication and support, answering content questions on HRD, and instructional design. Few individuals who have occupied the administrator position felt that they did an adequate job of performing all of these functions, and many found the experience to be less than satisfying. The exception was when the position was shared among people with complimentary skill sets, and specific responsibilities were assigned to each person. Some also said that the expectations others held for their role were unreasonably high.

Student Educational, Communication, and Support Needs The persons interviewed reported that some DL students enrolled in HRD courses simply because those courses were available. They saw these DL courses as their only option due to constraints in time or geographic distance. These same students tended to appreciate having access to higher education and were willing to overlook technological shortcomings in the delivery. Students interested in fields other than HRD often asked why other programs were not available to them via distance learning.

Some students in DL courses sought out the DL administrator or on-site coordinator because they felt that instructors were not easily available. Communication through a variety of means became more important since personal, informal classroom contact (before and after class, and during breaks) was rarely available. The communication methods used included telephone, individual conference via ITV before class, e-mail, and computer conferencing. Courses that used a broad array of communication were positively perceived to have built a "community." It was reported that ITV students, in general, felt that they could interact satisfactorily with the instructor at the broadcast site, though the University's system is set up to shut down the transmission precisely at the time the class is scheduled to end.

All persons interviewed said the courses offered through DL had to be more entertaining, engaging, and exciting than traditional classroom instruction to hold students' interest. Visual materials used in ITV classes needed to be of high quality, including larger graphics and smaller amounts of detail, in order to be viewed clearly at remote locations. Visuals created using PowerPoint or other graphic packages were cited by several persons as contributing to student satisfaction.

Several people reported that ITV and Internet classes that used standard adult learning principles in the instructional design increased student satisfaction. The learning principles cited included shorter presentations, frequent breaks, group discussion, allowing participants to define personal learning goals within the course goals, and heavy use of projects and papers that reflected application of course content to the students' environment and experience.

What Would Make Distance Education More Feasible?

Based on these shared experiences with distance learning at the University of Minnesota, the following suggestions are made to increase the feasibility of distance education.

Numbers of Students: Marketing and Cooperative Ventures Distance learning using two-way communications technologies requires large numbers of students to justify the cost. Careful business planning is needed to design a financially viable distance learning program. Three possible ways to get the numbers needed deserve particular attention. One is marketing, especially to constituencies not usually targeted by University publications. Students from outstate Minnesota, professionals and others who cannot commit to regular class attendance, and persons from outside the state are all possible target markets. Another approach is to enter into partnership with other educational institutions, perhaps from other countries, to offer distance learning courses to students from both institutions. The HRD program has already discussed this possibility with universities in the Netherlands, South Africa, Korea, and the Peoples' Republic of China. Such a relationship could well emerge within the next year. A third option would be to move away from the current, fixed-cable system, with its limited broadcasting flexibility, to a system, such as available through ISDN lines, to broadcast to multiple locations at flexible sites.

Commitment from the University to Serving Constituents Distance learning can help the University serve students who would otherwise not have access to higher education and can make the University into a national and global institution. The strategic issue for the University is what its mission should be in the future and what constituents it should serve. If broad outreach throughout the state, the nation, and the world is part of this strategy, distance learning will need to be a key component. But without the appropriate infrastructure to support this mission, it will not be fulfilled.

Systemic Support from University Infrastructures The University infrastructures are currently geared toward supporting a classroom experience. Distance learning requires different administrative support functions, and these must be accommodated to make such programs function smoothly. Numerous changes would be required in Graduate School policies discriminating against distance learning, high tuition rates for non-residents, confusing registration procedures, the assumption that courses begin and end within a specified period of time (currently, quarters), lack of appropriate faculty workload policies and reward systems, inadequate equipment infrastructure, and so on. Detailed recommendations for improvements within the University of Minnesota system are contained in a report from the Distance Education Council and Distance Learning Strategic Planning Committee (1997), of which McLean is a member, entitled, *Distance learning and information technology at the University of Minnesota.*

Using a Broad Array of Communications Technologies The goal of distance learning is to deliver education to students outside of the traditional classroom, often without face-to-face contact with an instructor. A full distance learning program needs to focus on delivering that education, not on the use of any one delivery medium. In fact the various media are most effective when used in combination.

Issues of Access Access in terms of technical skill and physical access to the technology is crucial to the success of distance learning. Internet courses are especially open to criticism on the issue of elitism because not everyone has access to the equipment nor knowledge to use the technology. While computer labs are available on campus, using them for Internet courses is difficult at best and defeats the primary advantage of the use of the Internet

Conclusions

Educationally, the HRD Distance Learning Project at the University of Minnesota has been a success. Students who would not otherwise have had access to higher education were served. Graduate degrees in HRD were conferred. Student satisfaction with the program was generally high. Academically rigorous courses were developed and delivered. Faculty members gained skills in using the new delivery media, and several new courses were developed. While physical and technical access to Internet courses was a problem initially for some students, most were able to overcome these challenges.

However, the HRD Distance Learning Project will not be continued with its current focus after its funding runs out in June, 1998. The courses are simply too expensive to continue offering to the numbers of students currently being served. Several courses offered via Internet, however, are likely to continue as part of the HRD and Adult Education curriculum.

The two remaining distance courses we will yet offer are all electives. It will not be possible for new, incoming students to obtain a degree via distance learning. However, several students who have begun degrees through ITV will be able to complete their degrees using some course substitutions combined with supervised independent study. A new ITV laboratory using ISDN technology has just been installed in the building across from the building housing HRD. It has already been used for seminars and has proven to be effective. The use of this laboratory, in conjunction with the Internet and continuing efforts to create world-wide partnerships, will provide an ongoing opportunity for HRD at the University of Minnesota to continue to explore ways in which a broad range of students can be served through distance learning.

References

Bates, A. W. (1995). *Technology, open learning, and distance education*. New York: Routledge.

Bell, P., & Davis, E. A. (1996, April). *Designing an activity in the knowledge integration environment*. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.

Bell, P., & Davis, E. A. (1995). *The knowledge integration environment: Theory and design*. Berkeley, CA: Graduate School of Education, University of California, Berkeley.

Kelly, M. (1990). Course creation issues in distance education. In: R. D. Garrison & D. Shale (Eds.), *Education at a distance: From issues to practice* (pp. 77-100). Malabar, FL: Robert E. Krieger.

McIssac, M. S., & Gunawardena, C. N. (1996). Distance education. In: D. H. Jonassen (Ed.), *Handbook of research for educational communications and technology* (pp. 403-437). New York: Simon & Schuster Macmillan.

Miller, G. (1997). Agricultural education at a distance: Attitudes and perceptions of secondary teachers. *Journal of Agricultural Education, 38*(1), 54-60.

Newman, D. R., Johnson, C., Webb, B., & Cochrane, C. (1997). Evaluating the quality of learning in computer supported co-operative learning. *Journal of the American Society for Information Science, 48*(6), 484-495.

Oblinger, D. G., & Maruyama, M. K. (1996). *Distributed learning*. Cause Professional Paper Series #14. Boulder, CO: Cause.

Phillips, G. M., Santoro, G. M., & Kuehn, S. A. (1989). The use of computer-mediated communication in training students in group problem-solving and decision-making techniques. *Readings in distance learning and instruction, 2* (pp. 131-144). University Park: Penn State University.

Romiszowski, A. J., & Mason, R. (1996). Computer-mediated instruction. In: D. H. Jonassen (Ed.), *Handbook of research for educational communications and technology* (pp. 438-456). New York: Simon & Schuster Macmillan.

Rosenthal, R., & Rosenow, R. (1991). *Essentials of behavioral research: Methods and data analysis*. New York: McGraw-Hill.

Shale, D., & Garrison, D. R. (1990). Education and communication. In: R. D. Garrison & D. Shale (Eds.), *Education at a distance: From issues to practice* (pp. 23-40). Malabar, FL.: Robert E. Krieger.

Simonson, M., & Maushak, N. (1996). Instructional technology and attitude change. In: D. H. Jonassen (Ed.), *Handbook of research for educational communications and technology* (pp. 984-1016). New York: Simon & Schuster Macmillan.

University of Minnesota Distance Education Council and Distance Learning Strategic Planning Committee. (1997). *Distance learning and information technology at the University of Minnesota*. Minneapolis: Author.

Winn, W. (1990). Media and instructional models. In: R. D. Garrison & D. Shale (Eds.), *Education at a distance: From issues to practice* (pp. 53-66). Malabar, FL.: Robert E. Krieger.

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Incorporating Action Learning in the Classroom: A Case Study

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This paper describes an HRD graduate class which used action learning principles to gather assessment data for an academic program. The merits and potential problems of employing action learning projects in the classroom are discussed.

HRD academic programs increasingly are using action learning projects as a means of accomplishing significant learning objectives (Marquardt, 1997). Since action learning is viewed as an excellent alternative to more traditional delivery systems, it seems logical that an academic program could benefit by incorporating this learning methodology into the curriculum. In the spring semester of 1997, I taught a graduate level course entitled "Focus Group Research." This course fulfilled a requirement for masters level students working on an education degree with a cognate in training and development. The course featured an action learning project which will be described in this paper. The merits and potential problems of action learning in the classroom will also be discussed.

Problem

Like any effective human resource development unit, college programs are being asked routinely to assess their effectiveness. The university where I teach now requires each academic program to develop an assessment plan and to evaluate student learning, student satisfaction, and curriculum on an on-going basis. My department's assessment team decided that we needed to gather some qualitative data during the 1996-97 academic year. The previous year our attempts to survey alumni had been unsatisfactory — the response rate was poor and the questions we asked proved to be of little value in curriculum reform. We realized that gathering qualitative data would not provide us with conclusive answers, but we felt this method would yield different, perhaps richer data, and it would assist in developing a well constructed quantitative assessment.

The assessment team decided to use focus groups to gather information regarding alumni satisfaction with the program and to find out if we were providing a curriculum that would help meet employers' needs. We realized faculty members could not conduct the focus group discussions for a variety of reasons. We concluded that developing a course that emphasized focus group methodology and assessment and involved an action learning project could be beneficial both to students and to the department.

The Course

The resulting course entitled "Focus Group Research," was designed to accomplish three major objectives. Students would learn more about program assessment and focus group research, they would develop the necessary skills to conduct focus group discussions, and they would engage in an action learning project. Action learning had been discussed in many of their classes as a potentially effective approach to learning, however few students had experienced it in their businesses or in previous college courses.

The assessment team decided to select students to participate in this class. We wanted students with some background in assessment, and we wanted students that we felt would devote the necessary time and effort to produce an effective assessment. Six graduate students and two undergraduates were approached and asked if they were interested in the course; five graduate

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students and one undergraduate did enroll in the course. All of the students except one were within 1-2 semesters from graduating. The issue of student participation is important and perhaps in this case we should have opened the course up to more students. I will return to this issue later in the paper.

The course was designed as a one semester, three credit hour course. The first four weeks of the semester we met on a weekly basis. The majority of this time was spent orienting the students to the project and discussing focus group research. One meeting was devoted to meeting with the assessment team (comprised of three faculty members) to discuss the project. After the fourth week, we met at least once every two weeks. The entire group worked on most of the preliminary tasks. Students were divided into dyads once the dates for the focus group discussions were established. These dyads were responsible for two focus groups discussions with each student serving as moderator for one discussion and assistant moderator for the other discussion.

The students helped design the majority of the assessment. For example the class, with the assistance of the instructor and the other two members of the assessment team, decided how participants would be chosen and what questions would be asked. The students contacted potential participants using a script the class had written to describe the project. After the class drafted questions for both the employer and alumni focus groups, we piloted the questions using an undergraduate HRD class studying assessment. The feedback from the undergraduate class and the assessment team greatly improved the clarity of the questions.

The class conducted six focus group discussions in the tenth through the twelfth weeks of the semester. Three focus groups were comprised of alumni of our undergraduate program; the other three consisted of representatives from various companies in the local area -- most of them held supervisory or HR positions within their companies. After the focus groups were conducted, the students prepared verbatim transcripts of the focus group discussions they moderated.

Since this was the first time I had incorporated action learning in the classroom, I was very anxious to receive feedback from the students regarding the experience. All of the students had been in previous classes with me, and I felt I had established good rapport with all of them. As a result, the students provided me with informal feedback throughout the semester. At the end of the semester, each student was provided an open-ended questionnaire to complete with a return envelope. I wanted them to spend some time reflecting on the experience before writing their comments. Five of the six students returned their questionnaires to the department secretary who compiled all of their responses.

The Project Results

It is debatable whether this classroom project should be labeled action learning. Watkins & Marsick (1993) identify three major components of action reflection learning: project work, "just-in-time training" that occurs as the need arises, and "discussion of concerns back on the job that arise as learners try out new skill outside of the program" (p. 126). The class project described above involved these three components. The assessment project was the focus of the class — it was a real university problem that was addressed by a small group of peers. Students gained knowledge and skills necessary to complete the project throughout the semester. And discussions did occur before and after implementation of the project regarding concerns and problems the students would and did encounter in trying out these new skills.

However, in some respects this project lacked other important elements considered central to action learning. An essential component of action learning involves the development of solutions to a problem "that has no easily identifiable solution" (Marquardt, p. 4). A solution to this assessment problem already had been determined by the assessment team — the students focused their attention on solving implementation problems. An additional hallmark of action learning teams is that throughout the problem solving process, assumptions are questioned (Watkins & Marsick, 1993; Marquardt, 1997; ARL™, 1996). As a result of this questioning process, new insights regarding the problem emerge which may lead to better solutions and greater learning. In this situation, there was very little questioning of assumptions probably due to the way the assessment team developed the project. We (the assessment team) assumed that using focus groups would be an effective way to assess our program. This assumption and other assumptions (i.e., the usefulness of these types of assessment in higher education) were never questioned.

Perhaps it is impossible to meet all of the criteria of action learning in academic settings, because so many universities are locked into the semester format. In a 14 to 16 week format it is extremely difficult for an action learning team to explore a complex organizational problem, act on the problem, and "test new knowledge and skills" (Marquardt, p. 5). Time was a critical issue for the students and myself as we worked on this project. One student wrote on the evaluation: "The project was a lot more work than I had anticipated. At times I felt rushed. I didn't feel I was doing a very thorough job. . ." Most of the students commented that they would have liked more time to practice facilitating a focus group before the "real" discussion occurred. Some commented that they would have liked to have conducted a second discussion, because they had learned so much from facilitating one. I found there was not enough time in class to focus on information regarding assessment. Almost all of our time during class was spent discussing focus groups in general or working on the specific project.

Most critical was the lack of time to reflect on the process. Reflection is considered an essential component of action learning (Yorks, et al., 1996; Baldwin, 1996). According to Brooks and Watkins (1994), "the notion that we learn from our experience through cycles of reflection and action is central to all of the action technologies" (p. 6). This is not to say that the assessment project was devoid of reflection. The students were required to keep a journal where they reflected on reading material, class discussions, and their experiences. However, with deadlines regarding the project always in mind, we often found ourselves too busy with activities to reflect adequately on the learning.

Despite these criticisms of the project all five students who responded to the end of course evaluation indicated they had learned from the project. Some of their comments included:

> "This was an excellent hands-on learning experience. I feel as though I have a sound basis for conducting focus groups in the future."
>
> "It was a wonderful experience to actually use the training in a hands on project. . ."
>
> "Conducting the focus group with true subjects rather than make believe situations provides a wonderful learning experience."
>
> "This class required more work and time than any thus far but has also been the most useful, practical, and interesting. . ."
>
> ". . .It was a learning experience for all of us and any future courses that can be further enhanced with action learning techniques will result in a win/win situation for the students and the University. . .I appreciated the opportunity to participate in this non-traditional activity and reap the benefits. It should be repeated again!"

Two of the students commented on how helpful it was to work as a team. When asked about what aspects of the course were most useful for learning, one wrote: "The interaction we had as a group when trying to pull everything together. This really demonstrated how the power of the group is superior to that of the individual (in most cases) when it comes to putting together a quality product."

There were other benefits of this project. The students and the focus group participants felt the project was an excellent way for the department to build alliances with employers within the community and strengthen its affiliation with alumni. The focus group discussions yielded some useful data that the department will be able to use to improve our curriculum and teaching. It also reinforced the importance of partnering with my students; that I have as much to learn from projects such as this one, as my students.

Implications for HRD: Incorporating Action Learning into Academic Programs

Incorporating action learning into HRD programs is an effective way to provide students with experience working through HRD problems. Projects such as the one described above offer a viable alternative to internships for real world experience. This can be very important -- especially on campuses with a large commuter population. All of the students engaged in this action learning project were employed full-time, so most internships, for example, would have been out of the question. And even though they all had significant work experience, many of them lacked HRD experience. This project obviously did not provide the gamut of experiences needed for an HRD practitioner, but it did provide some opportunity to apply skills and work through a problem. Incorporating a large scale project or several action learning experiences throughout the curriculum may further strengthen an HRD program.

However before programs embrace action learning, it is critical that faculty and administrators consider the potential ethical issues that may arise when using this form of learning. For example, are we using action learning chiefly as a way to get projects completed? Or will the projects involve meaningful problems that will facilitate student learning? Brooks and Watkins (1994) pose a crucial question that should be carefully examined when using this methodology in the classroom: ". . . whose interests does the action technology serve?" (p. 12)

Also critical to the success of action learning is the facilitator, "set advisor," or "project team advisor" (Yorks, et al., 1996, p. 314; Baldwin, 1996; Marquardt, 1997). Does this role change when the facilitator is the professor? Will the grading process diminish its effectiveness? Will we feel a need to "control the process" (Watkins & Brooks, 1994, p. 106)? Watkins & Brooks elaborate on this control issue: "This means that facilitators must examine their own intentions to impose an ideology, reap ego-related or professional rewards, or achieve a 'successful' outcome. This can be a painful process and is not one that many undertake willingly" (p. 106). At the outset of this project, the assessment team wrestled with our concerns about achieving a "successful outcome." We wanted students who would represent the department and the university well, therefore we selected the students we wanted in the class. One student who we had not asked to enroll approached me about joining the class, and I subsequently invited her to enroll. Our decision regarding selection may not have been optimal because it denied some students this learning opportunity. However, the feedback from the project has led me to consider incorporating more action learning in my classes. So more students in the future may benefit from this first effort. The selection decision underscores the importance of thinking through all aspects of a project before incorporating action learning methodology in the classroom.

Finally, confidentiality issues often will arise as the students begin to work on a problem. In my situation, it was critical that the students as focus group moderators realized the importance of respecting the confidentiality of their respondents. Therefore, each student was required to sign a statement that indicated they would not repeat information divulged by participants (except via transcripts) and they would not attribute any particular comments to specific respondents by name or title. Other situations involving community organizations or businesses are likely to result in a different set of confidentiality issues. In my situation, the university's human subjects office was very helpful in responding to my inquiries.

Summary

As the field of HRD continues to evolve, academic programs need to rethink how they teach students of HRD. Many businesses are using action learning to develop their employees, hence it seems logical that action learning also should be employed in the college classroom. However, there is a need for continued dialogue regarding how to incorporate this methodology into the classroom successfully to ensure that significant learning occurs.

References

ARL™ Inquiry (1996, March). Developing an infrastructure for individual and organizational change: Transfer of learning from an Action Reflection Learning™ program. Paper presented at the Academy of Human Resource Development Conference, Minneapolis, MN.

Baldwin, T.T. (1996). Invite reaction: Comments on feature article. Human Resource Development Quarterly, 7(4), 331-334.

Brooks, A. & Watkins, K. (1994). A new era for action technologies: A look at the issues. In A. Brooks & K. Watkins (Eds.), Learning through action technologies. New Directions for Adult and Continuing Education, no. 63. San Francisco: Jossey-Bass.

Marquardt, M. (1997, Summer). Action learning in the classroom. Performance in practice. Alexandria, VA: American Society for Training and Development.

Watkins, K. & Brooks, A. (1994). A framework for using action technologies. In A. Brooks & K. Watkins (Eds.), Learning through action technologies. New Directions for Adult and Continuing Education, no. 63. San Francisco: Jossey-Bass.

Watkins, K.E. & Marsick, V.J. (1993). Sculpting the learning organization. San Francisco: Jossey-Bass.

Yorks, L.; O'Neil, J.; Marsick, V.J.; Nilson, G.E. & Kolodny, R. (1994). Boundary management in Action Reflection Learning™ research: Taking the role of a sophisticated barbarian. Human Resource Development Quarterly, 7(4), 313-329.

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A Study of the Learning Characteristics of a Group of Adults Undertaking a HRD Program in a Tertiary Environment

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The study uses a qualitative, or interpretivistic, approach to examine the thoughts and feelings of four adult learners undertaking a Human Resource Development (HRD) program in a tertiary institution. Early indications from that analysis have indicated that the data generated should provide rich information upon the thoughts and feelings of adults returning to formal learning after a long break in their lives.

To date few, if any, studies have reported a micro analytic approach to adult learners prior to a learning experience, during that learning experience and on completion of that experience. Particularly, no studies appear to have examined adult attributions, determined adult approaches to learning and examined their cognitive processes in a systematic fashion. This study attempts to address such a gap in the literature.

From the literature it appears that the search for a theory of adult learning has just begun (Merriam, 1993). In the effort to forge a distinction with children's learning it seems that the most promising difference is the adult desire for self-directedness (derived from work by Houle (1961), Tough (1979), Knowles (1980), Candy (1991) and others) which, in turn, is often motivated by a desire to fill a perceived gap between what the learner already knows and what they perceive they need to know (Kauffman, 1994). Perhaps then it is the nature and existence of this motivation which differentiates adult learners from children. This study postulates that adult desire to learn - their motivation - is a product of the interplay of explanatory style, learned helplessness, conceptions of learning, and metacognitive and cognitive processes.

Research Questions

The study sought to answer the following questions:

1. What are the characteristics of adult learners in a HRD program in a tertiary setting?
    What are their backgrounds in terms of education and experience?
    What are their ages, sex and ethnicity?
    What motives do they have for entering the program?
    What expectations do they hold about the program?

2. What are the conceptions of self-performance that adult learners appear to hold and to develop in a tertiary learning situation?
    What are their conceptions before, during and following the learning experience?
    What sorts of ideas, beliefs, views, emotions, lines of reasoning make up the learner's conception of self-performance and what are the relationships between these?
    What role does a learner's causal perception of success and failure appear to fulfill in a conception of self-performance?

3. What are the conceptions of approaches to learning that adult learners appear to hold and then develop in a tertiary learning situation?

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What are their conceptions of approaches to learning before, during and following the learning experience?
How do their approaches to learning relate to their motivation?

Methodology

The research was a qualitative, or interpretivistic, micro analysis of four adult students undertaking a tertiary HRD program. The research was divided into three stages: a presage stage, a process stage and a product stage. Data were collected on the four adult students at each stage, that is, before the HRD program, during the conduct of the program and at the completion of the program.

The Presage Stage Data were collected before the students started the program using semi-structured interviews and two standardized instruments. The instruments were used to give the researcher some additional data on the characteristics of the students as individuals which could be compared with the qualitative information gained from the interviews.

Interviews were used to gather biographical details and student perceptions of the program and their motivation to complete it. Data were collected on explanatory style by using the Attribution Style Questionnaire (ASQ) (Petersen et al, 1982) which indicates the degree of permanence, pervasiveness and personalisation that the subjects attribute to the causes of the events in their lives, or in other words, the degree of optimism and pessimism they possess.

Information on their approaches to learning was gathered through administration of the Study Process Questionnaire (SPQ) (Biggs and Telfer, 1987) which aims to discover whether learners hold deep, surface or achieving approaches to learning.

The Process Stage Stimulated recall methodology was used to obtain information on the students' covert behavior during the learning experience. Sessions were videotaped and, on completion of the learning experience, subjects were interviewed on their thoughts and feelings during the experiences as prompted by the tape. The interviews were transcribed and then analyzed to separate interactive thoughts (those thoughts reported by the subject of what he or she was thinking and feeling during the sessions) from non-interactive thoughts (those thoughts reported by the subjects during the interview that were additional to interactive thoughts). Two examples from the transcripts of clues which indicate interactive data are: "I was sort of thinking..." and "You feel you are the only one who feels that way...". An example of a clue to non-interactive data is: "No, I'm sorry I can't remember that bit..."

As a first stage of content analysis interactive thoughts were unitized, that is, expressed thoughts were identified into units of complete ideas. Such units consisted of a series of words or even a whole paragraph of transcript. These units were then coded according to categories within the developed content analysis system from which both quantitative and qualitative analysis followed.

Journals were also used by the subjects where they reported random thoughts and feelings upon the entire learning experience. These documents were analyzed and enabled further triangulation of data to be undertaken.

The Product Stage Interviews were conducted at the conclusion of the program. The interviews aimed to gather information on the subjects' sense of satisfaction and whether expectations had been met. Final achievement grades were examined for each subject to determine the facilitator's perceptions of their individual achievements during the program.

Results and Conclusions

Results are tentative at this stage. The four subjects, two men and two women, have similar backgrounds. The men worked in a trade and the women in secretarial positions early in their working lives. They all are now working as trainers. Apart from one of the men, all had reasonably negative experiences at school and found it largely irrelevant to their lives. This theme of relevance appears to be a common factor in much of their interaction with the researcher.

Their thoughts about entering university later in life are similar - doubts about their ability to cope and the fear that fellow students would be better performers. In terms of their conceptions of learning three adopt an achievement orientation while one has a surface approach. Their attributional styles were all from a medium to high optimistic orientation.

The initial analysis of covert behavior in the training room appears to indicate that interactive thoughts can be categorized according to a modified version of CASSIT (Content Analysis System of Student Interactive Thoughts) (King, 1979). The nine categories of units of interactive thoughts in CASSIT are:

1. *Subject Matter* - thoughts on content
2. *Cognitive processes* - thoughts involved with learning
3. *Behavioral Moves-Self* - thoughts about own actions
4. *Behavioral Moves-Student* - thoughts about other students
5. *Behavioral Moves-Facilitator* - thoughts about the facilitator
6. *Self Performance thoughts* - thinking about own performance
7. *Self Performance feelings* - emotions about own performance
8. *Feelings* - not associated with self-performance
9. *Non-task related* - thoughts not pertaining to subject matter,

An additional category summarizing metacognitive thoughts (awareness about own thinking) has been developed. Otherwise CASSIT will be a useful instrument for data analysis. There is ample rich evidence in the transcripts to support this claim.

As interactive data provides the richest clues to student's thoughts and feelings about their learning experiences King (1979) identified nine guidelines that are to be used in classifying data as interactive. Data are to be classified as interactive when the:

- student recalls what they are saying or doing, or what they have said and done.
  "Yeah, just writing the schedule of what he's going to be talking about today".

- student is showing awareness of what they were doing rather than thinking.
  "I think I was just trying to recall what he was talking about last week by looking at last week's sheets."

- student is engaged in general discussion about learning and situations in the learning process that sometimes arose:
  "Sometimes I'll sit in front of the computer and note it straight into the computer...but most of the time I like to write it down as I always have."

- student is providing a reason, explanation, rationale for what they are saying or doing:
  "I turned up here and realized that I've got a new car and didn't have my parking sticker - having to find a parking spot - feed the machine - consequently that's what stressed me out more than anything."

- student summarizes, restates, reviews what they or the interviewer has said previously;
  "I guess what I'm trying to say in a round about way is that for me to learn it I do like to be able to see how this is relating to me."

- student discloses causal explanations and perceptions of behavior in response to extended questioning by the interviewer:
  Int. *"You said you are hoping to keep focused."*

> Stu. *"Yeah, because I've actually been quite ill this week and became very anemic And tired...I find it hard to remember.*
> Int. *"Does this concern you?"*
> Stu. *"Yes it concerns me greatly - it concerned me the whole time I was trying to do my assignment.*
> Int. *"You can't remember what was going through your mind?"*
> Stu. *"No, but looking at the video my body language is that of someone fairly tired, I think."*

- student indicates uncertainty about thoughts and feelings being interactive:
  "I can't actually think of what I was thinking - probably I was trying to think over what had happened to me over the last two weeks."

As well, look for contextual clues. Decisions about whether data are interactive can only be reached after examining clues found in lines prior or subsequent to sections under scrutiny. Finally, when in doubt classify data as non-interactive.

Implications

While data analysis is not yet complete it is anticipated that the triangulation of data that comprises the micro-analysis of the four adult learners in a tertiary setting will alert adult educators to the covert thought processes that may exist in many adults returning to study later in life. For instance, there is evidence of joy mixed with apprehension about entering university life. As well, subjects identified a strong need to be able to relate learned information with that which is already known, and for that information to be highly relevant to the workplace. Time, or lack of it, for assignment preparation is an important stressor but the motivation to succeed at tertiary level placates this stress to some extent. This sample of information, and that which has not been reported in this paper, needs to be known and understood by adult educators in order that they can adjust their presentation and facilitating skills during adult learning programs to cater for the nature and range of adult student thoughts and feelings.

References

Biggs, J.B. & Telfer, R. (1987) *The process of learning*, Sydney: Prentice Hall.

Candy, P.C. (1991) *Self direction for lifelong learning*. Sydney: Prentice Hall.

Houle, C.O. (1961) *The inquiring mind*. Madison: University of Wisconsin Press.

Kauffman, R. (1994) *Needs assessment and analysis*, in Tracey, W.R. (Ed.) Human Resource Management and Development Handbook. AMACON: New York

King, L.H. (1979) *An attributional analysis of student achievement-related behavior and the expectancy effect*, Unpublished doctoral dissertation, University of Alberta.

Knowles, M. (1980) *The modern practice of adult education. From pedagogy to andragogy*, (2nd ed.) New York: Cambridge Books.

Merriam, S.B. (1993) *Adult learning: Where have we come from? Where are we headed?* New Directions for Adult and Continuing Education, 37, 5-12.

Petersen, C. et al. (1982) The attributional style questionnaire. *Cognitive Therapy and Research*, 6, 287-299.

Tough, A. (1979) *The adult's learning projects: A fresh approach to theory and practice in adult education*. (2nd ed.) Toronto: Ontario Institute for Studies in Education.

The Politics of Program Evaluation and the Misuse of Evaluation Findings

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For nearly 40 years, the HRD field has relied on the use of a particular taxonomy for writing about, and conducting, evaluations of learning and performance efforts. Most of this work, however, has been done in an a-theoretical mode. As a result, HRD professionals have failed to consider the political and ethical implications of evaluation practice. In this paper we discuss the status of evaluation theory, evaluation as a political activity, and the findings from a survey on evaluation use and misuse.

HRD evaluation is at a crossroads; it can either take advantage of what other disciplines have learned about program evaluation and use it to facilitate significant learning and performance change, or it can continue to limp along contributing little to organizational effectiveness. HRD researchers and practitioners must become better skilled in evaluation theory and practice so that they can help organizational members understand the value of evaluation and the role it can play in organizational decision-making processes.

For more than 40 years, HRD evaluation has operated in an a-theoretical mode, relying on a patchwork of methods and designs with little attention paid to the plethora of variables that effect HRD's effectiveness, the context in which HRD interventions occur, and the values and politics intrinsic to evaluation practice. This paper argues that evaluation is a values-based, political activity that often leads to the misuse of evaluation processes and findings. As HRD researchers and practitioners begin to develop and integrate a meaningful theory of evaluation into HRD practice, the application of knowledge gained from evaluators regarding the political misuse of evaluation findings is essential.

Research Questions

The study reported in this paper was guided by the following research questions:

1. What is the status of HRD evaluation theory?
2. In what ways is evaluation a political activity?
3. How do evaluators define misuse?
4. To what extent is intentional and unintentional misuse, and nonuse a problem today compared with ten years ago?
5. What evaluation use issues will continue to challenge HRD evaluators in the coming years?

Research Design

To answer the research questions, we used a mixed-methods design. Answers to the questions about evaluation theory and politics were addressed through a review of the HRD evaluation research literature (Hilbert, Preskill and Russ-Eft, 1997). A review of the evaluation theory literature was also conducted.

The second method was a survey conducted with American Evaluation Association North American members of the Evaluation Use topical interest group (N=526). The survey was developed by experts in the field of evaluation who had written extensively on the subject of evaluation use. A core set of open-ended questions regarding evaluation use and misuse was generated by the team and subsequently modified through a series of iterations over a two-month period. The survey instrument was pre-tested with seven practicing evaluators whose backgrounds

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represented a diversity of evaluation experience. Two mailings plus a follow-up to non-respondents resulted in a 54% (n=282) return rate.

The survey data were entered into Pulsesurvey, an analysis program by Scantron, for the purpose of generating descriptive statistics. The data were then transferred into an SAS program so that cross-tabulations could be conducted for several survey items and contextual variables that distinguished respondents. Qualitative data from the open-ended questions were entered into the Data Collector analysis program. A process of content analysis was then used to categorize and code the data. Tests of inter-rater agreement (between the authors) assured that the data were being coded reliably.

Findings

The findings are presented in terms of theories of evaluation, evaluation as a political activity, and the survey results.

Theories of Evaluation and HRD The review of the HRD evaluation literature reveals that the vast majority of the evaluation "models" offered over the last 40 years are not grounded in a philosophy or theory of evaluation. The most prominent example of this is Kirkpatrick's four level model for the evaluation of training (1959 a, b, 1960, a, b), which has been the focus of conceptualizing and practicing HRD program evaluation for nearly four decades. Kirkpatrick suggested that to simplify training evaluation, trainers should evaluate their programs according to four levels: 1) participants' reactions, 2) participants' learning, 3) participants' behavior changes, and 4) business results.

In the literature, Hilbert et. al., 1997, found 57 journal articles describing or mentioning evaluation model published between 1959 and 1996. Of those, 44 (77%) included Kirkpatrick's model (either alone or in comparison with another model). Only thirteen articles discussed a model other than Kirkpatrick's. Most of these models attempt to measure some aspect of participants' reactions, motivation, learning, knowledge and skill transfer, financial results and general organizational impact. Most, however, are not true models that suggest hypotheses, relationships between variables, or are testable in ways that would produce generalizable results. Instead they tend to be taxonomies or classification schemes that offer trainers a framework for evaluating training programs. None of these models address the ethics or politics of evaluation practice.

Unfortunately, the evaluation taxonomies and frameworks offered over the last 40 years tend to position evaluation as a periodic event that is the sum of a set of technical skills and activities focused on a narrow set of variables using a limited number of designs and methods. As Shadish, Cook and Leviton (1995) have warned, "Armed with only methodology, the evaluator is ill prepared to cope with the harsh realities of social programming and policy, and can produce evaluations that are not used or are politically naive" (p. 183).

One of the problems in not having a theory of HRD evaluation is that we fail to consider critical environmental variables when commissioning, designing, and implementing an evaluation and then using its findings. A theory of HRD evaluation should encompass a body of knowledge that describes, predicts, explains, and adds understanding to that which is being evaluated. Evaluation theory describes and justifies why certain evaluation practices lead to particular kinds of results across situations that evaluators confront. A theory of HRD evaluation would build on general evaluation theory but would place it within a learning and performance context of organizations. Such a theory would take into account five theoretical bases: a) a theory of knowledge, b) theory of practice, c) theory of use, d) theory of social programming, and e) theory of valuing (Shadish, et al., 1995). Finally, an HRD evaluation theory would also be based on a logic of evaluation that involves, 1) determining criteria of merit, 2) constructing standards of merit, 3) measuring how well performance of the evaluand compares to these standards, and 4) synthesizing and integrating data into a judgement of merit or worth (Scriven 1980). However, at the current time, there is no HRD evaluation theory that is founded on the theoretical bases or any logic of evaluation practice.

Evaluation as a Political Activity

One set of variables that needs to be considered in any theory of HRD evaluation is that set associated with the politics and ethics of evaluation practice. While early evaluators (1960's) attempted to ignore the role of values in evaluation, it soon became apparent that this was imprudent, if not impossible (House, 1993, Shadish, et al., 1995). Given that programs themselves are outcomes of political decisions which are values-based, there is no such thing as a program that is value-free. Likewise, decisions that shape approaches to training and learning in organizations are also inherently values-based and political in their motivation and their results.

Evaluation is intrinsically a political activity; its affect on programs and organizations can be both positive and negative. Politics refers to the interactions of various actors within and among bureaucracies, clients, interest groups, private organizations and legislatures as they relate to each other from different positions of power, influence, and authority (Banner, Doctors and Gordon, 1975, p. 2). Evaluation practice becomes political because (Weiss, 1987):

1) Power and programs are themselves creatures of political decisions. For example, the choice made over the last several years to implement Total Quality Management (TQM) courses in organizations is as much a political decision as it is an economic one.

2) Because evaluation is undertaken to feed into the decision-making process, its reports enter the political arena. This includes using the findings to pursue a political agenda, to support one's ideas, or to lobby for resources.

3) Evaluation itself has a political stance by virtue of the fact that the judgments one renders about a program have the potential impact for the reallocation of power and resources. Decisions to expand particular training programs to the field, or to terminate portions of programs to a segment of employees, are political determinations.

Given the political nature of evaluation, evaluation processes and results can sometimes be misused by a variety of stakeholders. In the next section of this paper we describe the results of survey questions on misuse that have a direct relationship to the politics of evaluation practice.

Evaluation Use and Misuse

The Program Evaluation Standards (1994) are a testament to the importance the evaluation field places on the proper and ethical conduct of evaluators, and on the appropriate use of evaluation processes and findings. The construct of misuse is multidimensional and has received considerable attention in Stevens and Dial's (1994) New Directions for Program Evaluation. The need for methods to address ethical issues and the implications underlying evaluation is even more critical today given the changing landscape of how evaluation is increasingly being carried out in complex, political, dynamic organizations.

Findings of American Evaluation Association Survey: Evaluation Misuse

The survey results reported here are those findings specifically related to the topic of evaluation misuse, from a mailed survey to North American Evaluation Use TIG members conducted in 1996 (Preskill and Caracelli, 1997). The survey was mailed to 478 U.S. and 52 Canadian evaluators (N=526). We received responses from 282 TIG members (54%). This paper includes responses to two closed-ended questions and four open-ended questions from this survey.

Status of Non-use, Unintentional and Intentional Misuse Survey respondents who have been practicing evaluation for more than ten years (n=193) believe that the non-use of evaluation findings is much less of a problem today than it was ten years ago. However, respondents perceive little change in the intentional and unintentional misuse of evaluation findings over these years. Then and now, the majority of respondents rate these occurrences as a minor problem. However, nearly about a quarter of the respondents continue to perceive misuse as a major problem.

Definitions of Misuse The question, "How do you define misuse?", elicited 196 responses. The definitions provided by respondents resulted in nine categories that were classified as relating to Misuse, Non-use, or Misevaluation:

1. To Distort, Manipulate and/or Intentionally Misinterpret Findings
2. To Draw Unjustified Conclusions - To Go Beyond the Data
3. To Withhold or Selectively Use Evaluation Findings
4. To Punish or Reward Program Staff
5. To Terminate a Program or Justify Firings or Layoffs
6. No Intention to Use
7. Misuse at the Evaluation's Commissioning
8. Misuse During the Evaluation's Design
9. Misuse During the Evaluation's Implementation

In the sections that follow we describe these classifications and their subcomponents, and provide illustrative examples of each.

Misuse of Evaluation Findings Almost all of the respondents to this question (n=180) provided definitions of misuse that addressed instrumental misuses of findings; that is, the intentional and immediate wrongful or inappropriate application of evaluation findings. Many of the definitions suggest that clients misuse evaluation results in order to pursue a personal or political agenda and/or to support a preexisting bias. The underlying motivation embedded in many of the definitions is deception. For example:

- Intentionally distorting findings or processes for personal and/or political gain.
- Adjusting the description of evaluation findings to meet decision maker's agenda.
- Skewing the results to fit a division or agency's particular agenda.
- "Editing" results to fit a mind set and personal agenda.
- Misinterpreting the results or using only certain results to prove a point while ignoring the complete picture.

Six of the nine categories of definitions relate to instances of misuse, as follows.

1. To Distort, Manipulate and/or Intentionally Misinterpret Findings. The most common definition of misuse provided by 56% of the survey respondents (n=101), can be characterized as the distortion, manipulation, and intentional misinterpretation of evaluation findings. The particular instances of this type of misuse involve the following actions taken by the evaluation sponsor or client:

- Drawing incorrect conclusions
- Changing or reinterpreting evaluation results
- Making false claims
- Reporting findings out of context
- Distorting the results to make findings seem more or less favorable
- Manipulating or skewing data and/or findings
- Deliberately misinterpreting findings

2. To Draw Unjustified Conclusions - To Go Beyond the Data. Thirty-three respondents (18%) define misuse in terms of the client over interpreting data, generalizing findings too broadly, assigning causation where there is none, ignoring a study's limitations or caveats, and leaping from data to action (taking action on incomplete data or actions not supported by the findings). Definitions in this category include:

- Jumping to unsupported conclusions about causality
- Inappropriate generalization of results
- The application of evaluation findings or recommendations in a manner not supported by the design, intent, or data
- Drawing and acting upon conclusions that are clearly not supported by a careful examination of the evidence collected during an evaluation study

3. To Withhold or Selectively Use Evaluation Findings. In addition to the direct distortion, manipulation, or misinterpretation of findings, respondents defined misuse as intentionally withholding or selectively using findings. In this category findings are not misinterpreted by the client, but the client's selective use of findings may lead decision-makers to misinterpret and thus misuse the evaluation results in their decision making processes.

Respondents' examples (n=50, 28%) suggest that the picking and choosing of data or recommendations from a final report occurs when the findings are counter to the clients' beliefs and interests, or when the sharing of particular findings support a predetermined position. When this happens, negative information is suppressed or particular findings are ignored or hidden.

- Stakeholders select some results for decision-making without considering other results
- Selective use to support predetermined conclusion or course of action
- Selection of findings for public dissemination that conform to desired outcomes, while hiding or burying negative results
- Omitting relevant findings of the evaluation so that only the findings which support an independently reached conclusion are presented
- When stakeholders knowingly pick and choose data to report on the basis of "as needed" or "for convenience" for their own agenda -- Fueled by self-serving motives
- Submitting only a part of a full evaluation report to funders of a program

4. *To Punish or Reward Program Staff.* Of the eleven responses (6%) in this category, ten were examples of misuse where program staff is punished, verbally attacked, or labeled as ineffective. Only one definition of misuse in this category related to rewarding staff inappropriately:

- Using evaluation results to punish staff rather than using it in the context of positive organizational change
- Using negative results as a means to attack a group or person
- When evaluation results are used to punish service providers
- Rewarding organizations or individuals contingent upon meeting narrow performance targets

5. *To Terminate a Program or Justify Firings or Layoffs.* Ten respondents (6%) believe that misuse also applies to cases where evaluation findings are used to inappropriately terminate or cancel a program, to fire individuals and/or to justify layoffs. Some of the definitions of misuse in this category include:

- To terminate or substantially amend a program that is relatively successful as evaluated
- Management using evaluation results to support unpopular decisions, such as layoffs of staff, cost-cuts to programs
- Eliminating personnel/funding/program
- Using evaluation as a guise to gain control, dismiss employees, write own agendas

6. *Non-use of Evaluation Findings - No Intention to Use.* Seven respondents (4%) provided definitions of misuse where stakeholders fail to acknowledge the evaluation results, where individuals lose interest in the evaluation or where an evaluation report is not read or the findings considered. These definitions include:

- When the true results of the evaluation are not acknowledged
- Evaluation projects that are launched and later shelved with no accompanying action
- "Benign neglect" of evaluation outcomes

In addition to defining misuse in terms of the evaluation findings, 22% of the respondents (n=40) provided 38 different definitions that focus on misuse during the evaluation process. This category pertained to *misevaluation*; three subcomponents were identified: 7) misuse at the evaluation's commissioning, 8) misuse during the evaluation's design, and 9) misuse during the evaluation's implementation.

7. *Misuse at the Evaluation's Commissioning.* Seventeen respondents identified instances of misuse that occur at the inception of the evaluation study. These instances are usually attributed to the clients' or stakeholders' actions. Typically the request to conduct an evaluation is for symbolic purposes and there is no intention to use the results. In these cases, an a priori decision was made to use evaluation process or findings as a means to legitimize decisions already made, as a ritual, and as a means for covering up one's mistakes. Examples provided by the respondents include:

- Trying to prove a point by selecting the right evaluator

- Redirecting evaluation resources away from topics that are important yet controversial
- Deciding to evaluate to only placate articulated mandates for evaluation
- Using the process to legitimize something without using the results
- When evaluation is implemented for "window-dressing" and is not incorporated into organizational learning

8. *Misuse During the Evaluation's Design.* Ten more of the 40 respondents in this misevaluation category provided definitions of misevaluation that occurs during an evaluation's design process. This type of misuse is typically attributed to the evaluator but could involve the client's actions as well. These include:

- Discounting the evaluation design
- Any activity that fails to follow the guidelines found in the evaluation standards including poor design
- Designing bias in surveys
- Designing instruments and measures that are altered to yield the desired data and exclude information of importance to stakeholders

9. *Misuse During the Evaluation's Implementation.* An additional 24 of the 38 definitions in this category describe misuse in relation to an evaluation's implementation and are typically related to the evaluator's actions during the evaluation's implementation.

- Inappropriate or inaccurate information gathering, interpretation, formulating alternative scenarios for action
- Manipulating processes to bias results systematically
- Breaching ethical standards - e.g., promises of anonymity
- Intentionally excluding key stakeholders from the evaluation process/results
- Any activity that fails to follow the guidelines found in the evaluation standards including poor design, selective findings, biased approaches, inappropriate statistical applications
- Statistical manipulation to meet the needs of the evaluand's political agenda

Experiences With Misuse Respondents were asked, "How often have you personally experienced instances of evaluation misuse?" Using a four-point scale (frequently, sometimes, rarely and never), 10% of the respondents reported experiencing instances of evaluation findings being misused "frequently" and 43% experience misuse "sometimes". Just over one-third of the respondents "rarely" experience misuse of evaluations findings (34%) and 13% said they never experience the misuse of evaluation findings. It is interesting to note that beginning evaluators were much more likely than intermediate and advanced evaluators to say they had never experienced the misuse of evaluation findings.

Continuing Challenges Regarding Misuse We were also interested in learning what respondents saw as examples of misuse they believe will continue to challenge evaluators in their practice. Of the 282 respondents, 117 (41%) provided answers to this question. Of the 117 responses, 112 (96%) of the challenges are associated with the definitions of misuse, non-use and misevaluation described earlier:

- To support a preexisting or predetermined position (n=21)
- To withhold or selectively use findings (n=20)
- Misevaluation of evaluation implementation process (n=17)
- To draw unjustified conclusions (n=13)
- To distort, manipulate, and/or intentionally misinterpret findings (n=13)

Changes in the Field of Evaluation: Use and Misuse We were interested in knowing what kinds of changes Evaluation Use TIG members are seeing in the evaluation field over the past ten years. Respondents were asked to consider changes they considered to be 'progress', and changes they view as undesirable or negative. While respondents provided many different examples, we limit our reporting here to those responses that address changes regarding use and misuse.

Changes Perceived as Progress Over two-thirds (n=135/67%) of the survey respondents answered this particular question. From their responses, fifteen categories were developed. Of these fifteen, six relate to evaluation use and misuse.

Nearly half (n=46%) of the respondents to this question believe that increased stakeholder involvement in evaluations is evidence of progress. They think that evaluators are developing closer contact with stakeholders, involving a greater diversity of stakeholders, and are more willing to involve targeted users. Eight respondents specifically mentioned collaborative, participatory and empowerment evaluation approaches as an important means for increasing stakeholder involvement.

Increased client interest in evaluation and their increased understanding of the role of evaluation was also viewed as progress by 21% (n=29) of the respondents to this question. Many trust that evaluation is becoming increasingly institutionalized and is being seen as a means for adding value to an organization.

Nineteen (14%) respondents also believe that planning for use is becoming more common and is a sign of progress. These evaluators think stakeholders are developing a greater understanding of use issues, are becoming more sophisticated about use and misuse, and are wanting to disseminate findings more often. In addition, nine respondents (7%) are seeing more stakeholders who are viewing evaluation as a tool for learning. These respondents note that evaluation is increasingly being considered part of an organizational learning process. Seven (4%) respondents think there is currently more attention being paid to evaluators' ethical behaviors, which serves to lessen the likelihood of misuse. Six (4%) respondents think progress is being made in viewing evaluation use as process use, whereby stakeholders learn as much from the evaluation process as they do from the findings.

Changes Perceived as Undesirable or Negative Of the 282 survey respondents, 101 (36%) provided responses to this question. Twelve categories emerged from their comments of which three (n=21/21%) relate to evaluation use and misuse.

Nine (9%) of the respondents are observing an over-reliance on making decisions based on statistical results and going beyond what the data indicate. This involves rejecting conclusions due to a lack of statistical significance, over-generalizing findings, and using cost-benefit data that may not be valid indicators of program outcomes. Eight (8%) respondents expressed concern that evaluations are being used more frequently to terminate a program, to obtaining funding without intention to use the results, or as a means to distort the truth. And, four (4%) of the respondents note an increase in evaluators' willingness to slant the results to what they think the stakeholder wishes to hear, or administrators using formative results to make summative judgments.

Conclusion

In this paper we have tried, in a very brief space, to argue that the HRD field lacks a theory of evaluation that addresses the politics and ethics of evaluation practice. The survey findings on misuse confirm what Carol Weiss said nearly 25 years ago: "Many of the problems that still bedevil the evaluation enterprise are not so much failures of research expertise as they are failures to cope adequately with the political environment in which evaluation takes place" (1973, p.179). It is important for HRD researchers and practitioners to understand that evaluation is political by default in that it deals with programs that are themselves creations of political decisions that develop loyal constituencies and compete for survival. Given that evaluation is most often conducted to feed into the decision-making process, its reports enter the political arena. More than two decades later, evaluation continues to be a political enterprise, but the political nature of evaluation has not yet become part of the scholarly conversation in the HRD field.

As a result of our scan of the state of HRD evaluation, we propose the following for HRD researchers:

1) Develop a research agenda that moves beyond the constant tweaking of taxonomies, toward exploring the development of an HRD evaluation theory that takes into account the inherent politics of evaluation practice.
2) Incorporate a model of ethical thinking into an HRD evaluation theory to guide HRD evaluators' work, that addresses ethical principles such as respecting autonomy, avoiding undue harm, doing good, being fair, and being faithful. (Kitchener, 1984; Newman and Brown, 1996).

3) Engage in a series of research studies that explore how the results of evaluation studies are being use and/or misused.

For those of us who wish to continue professionalizing the HRD field, and HRD evaluation in particular, we would do well to consider Scriven's (1994) warning: "The absence of theory is terribly costly; different fields have reinvented the wheel or, worse, failed to do so; fundamental errors exist in many common evaluation procedures because of the failure to look at their logical foundations..."(p. 379).

References

Banner, D. K., Doctors, S. & Gordon, A. (1975). The politics of local program evaluation. Cambridge, MA: Ballinger.

Hilbert, J., Preskill, H. & Russ-Eft, D. (1997). Evaluating training. In L. J. Bassi & D. Russ-Eft (Eds.), What works: Assessment, development and measurement. Alexandria, VA: American Society for Training and Development.

The Joint Committee on Standards for Educational Evaluation (1994). The program evaluation standards: How to assess evaluations of educational programs, 2nd. Ed., Thousand Oaks, CA: Sage.

Kirkpatrick, D. L. (1959a, November). Techniques for evaluating programs. Journal of the American Society of Training Directors (Training and Development Journal), 13 (11), 3-9.

Kirkpatrick, D. L. (1959b, December). Techniques for evaluating programs-Part 2: Learning. Journal of the American Society of Training Directors (Training and Development Journal), 13 (12), 21-26.

Kirkpatrick, D. L. (1960a, January). Techniques for evaluating programs-Part 3: Behavior. Journal of the American Society of Training Directors (Training and Development Journal), 14 (1), 13-18.

Kirkpatrick, D. L. (1960b, January). Techniques for evaluating programs-Part 4: Results. Journal of the American Society of Training Directors (Training and Development Journal), 14 (1), 28-32.

Kitchener, K. S. (1984). Intuition, critical evaluation, and ethical principles: The foundation for ethical decisions in counseling psychology. The Counseling Psychologist, 12 (3), 43-56.

Newman, D. L. & Brown, R. D. (1996). Applied ethics for program evaluation. Thousand Oaks, CA: Sage.

Preskill, H. & Caracelli, V. (1997). Current and developing conceptions of evaluation use. Evaluation Practice 18 (3), 209-225.

Scriven, M. (1980). The logic of evaluation. Inverness, CA: Edgepress.

Scriven, M. (1994). The final synthesis. Evaluation Practice, 15 (3), 367-382.

Shadish, W. R. Jr., Cook, T. D., and Leviton, L. C. (1991). Foundations of program evaluation: Theories of practice. Newbury Park, CA: Sage.

Stevens, C. J. & Dial, M. (1994). Preventing the misuse of evaluation, New Directions for Program Evaluation, 64. San Francisco: Jossey-Bass.

Weiss, C. (1973). The politics of impact measurement. Policy Studies Journal, 1, 179-183.

Weiss, C. (1987). Where politics and evaluation research meet. In D. J. Palumbo (Ed.), The politics of program evaluation. (pp. 47-70). Thousand Oaks, CA: Sage.

Assessing the Business Results of Management Development Using the Critical Outcome Technique at CIGNA Corporation

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The purpose of this case study is to describe, in detail, the utility of the Critical Outcome Technique (COT) in evaluating a management development program at CIGNA Corporation. This field study application of the COT further established it as a practical and useful evaluative technique; however, it was determined that the COT process requires further development to increase its overall effectiveness.

In a previous iteration of validation research on the Critical Outcome Technique (COT), application of the technique to thirteen different HRD programs was briefly described (Swanson & Mattson, 1997). The present paper provides an in-depth description of the application of the COT to one specific management development program at CIGNA Corporation. Additionally, key learnings from this application and necessary revisions to the technique are discussed.

Organization Profile

CIGNA Corporation is a multi-line insurance carrier and financial services company with $19B in annual revenues and $99B in assets. Headquartered in Philadelphia, it is one of the oldest insurance companies in America, officially organized in 1792 by merchants meeting in Independence Hall. Training functions within the company reside at the corporate level as well as in each of eight separate lines of business.

HRD Program Description & Delivery

Management throughout the various lines of business at CIGNA have recognized the importance of supporting newly appointed managers in the early part of their management careers. A critical part of this support has consisted of a training program designed to build the knowledge and skills necessary to succeed as a manager in the company.

Essentials of Management (EOM) is a three day introduction to *basic* management concepts and skills. It is sponsored and delivered by the corporate training function and is targeted to the new manager with six to eighteen months of experience.

The program was developed in response to a widely felt need among the HR community to support the target population, the majority of whom had little or no formal training in management. EOM was first offered in January, 1996 and has been run on a continual basis since, both in the home office in Philadelphia as well as at multiple field locations. This basic program is mandatory for managers in the target population across all lines of business as well as staff functions.

The format of the program consists of short lecture, small group discussions, skill practice, reflective writing, and question and answer. Components of EOM include: the role of the manager, communication skills, conflict management, feedback, Myers-Briggs instrument, delegation, coaching, and motivation.

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Key Evaluation Issues & Events

Prior to this effort, evaluation of EOM in 1996 consisted of post-program reaction evaluations and surveys of participants and their managers ten weeks after the program. Post-program reaction evaluations indicated that over 90% of the participants believed that the program "Mostly Met" or "Fully Met" the stated objectives of the program. High levels of satisfaction with the program were reported by the participants as well. Satisfaction levels remained high in the results of the participant surveys administered ten weeks after the program.

Post-program survey results indicated that over 90% of the participants believed that the program was a significant factor in causing them to implement the skills and knowledge addressed in the program when they returned to the job. In addition, over 90% of the participants' managers reported that they believed that their employees' participation in EOM was a significant factor in on the job implementation of knowledge and skills.

Anecdotal data from both participants and their managers were offered that supported the findings of high satisfaction and the belief that the program significantly influenced on the job implementation of the knowledge and skills addressed in the program.

While the data collected were somewhat useful, analysis revealed only broad descriptions of on-the-job performance and business outcomes. In examining this data, some other critical questions that arose were:

- Is there a method to more precisely describe validated on-the-job performance?
- Is there a method that will describe validated business outcomes of the program?
- Is there an evaluation method that will control for the effects of intervening variables, e.g. participant motivation, participation readiness, environmental support, additional HRD initiatives, etc.

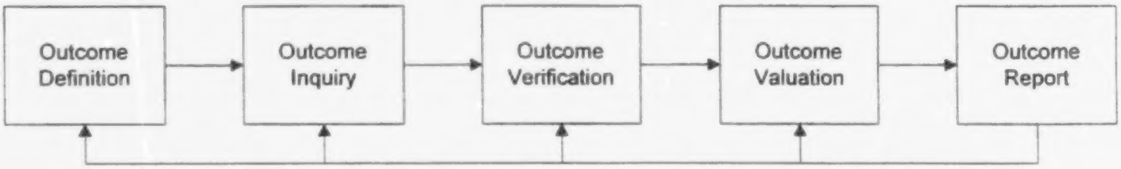
Consideration of these sorts of questions in corporate settings led to the original development of the Critical Outcome Technique and to its adoption by the CIGNA training team to assess the effectiveness of the 1997 EOM program offerings.

The Critical Outcome Technique

The Critical Outcome Technique is a practical evaluation system that can be applied to any performance improvement or human resource development (HRD) intervention (Swanson & Mattson, 1997). While most scholars and practitioners agree that evaluation should be an integral part of the program analysis, design, development, and delivery, in practice this is often not the case (Bassi, Benson, & Cheney, 1996; Swanson, 1996). The COT was developed as a means of assessing program effectiveness in a systematic, post-hoc manner.

The COT is a process model; it contains five steps which comprise the outcome assessment process. General descriptions of these steps can be found in Swanson & Mattson (1997). The following section describes the application of the model to the Essentials of Management program.

Figure 1. Model of the Critical Outcome Technique



Implementation of the COT at CIGNA

Implementation of the COT for Essentials of Management followed the five steps of the process in order:

Outcome Definition This part of the process specifies the intended critical outcomes of the program. Put simply, the key question in this phase of the process is: "What were we trying to do?" In the case of EOM, the intended outcomes, according to the designers of the program, were to develop skills in the areas of:

- Coaching employees for improved performance

- Providing developmental, constructive feedback
- Delegation
- Motivating staff
- Communicating expectations and managing results
- Managing conflict
- Handling difficult employee situations
- Accommodating differences in individual styles

The scope of EOM is broad in order to accommodate the diversity of needs of the targeted participants: new managers with 6 - 18 months of experience. There was no expectation that participants would leave the program with a highly developed set of skills in each of the intended outcome areas. Rather, the overarching goals of the program were to define for the participants just what it is that managers in the company are expected to do as well as to provide baseline management skills in core management practices. Thus, any application back on the job of a skill or set of skills acquired during the course of the program was considered as an achievement of an intended outcome. To define the critical outcomes for EOM, the assistant director for training and development reviewed the course objectives for the program, searching for the most specific information regarding desirable outcomes.

Outcome Inquiry The main question in this phase is, "What were the actual (as opposed to the intended) outcomes of the program?" The source of data for this phase are the program participants. Because the participants in EOM came from all areas of the company and from a variety of locations around the country, the most expedient method for collecting data was through an e-mail survey (see Figure 2 below). The use of e-mail for data collection made the data collection process simple and relatively easy to do. One person was able to send surveys to 100 participants in less than two hours. Surveys were returned via e-mail within 72 hours of being sent. The response rate was 40%.

Figure 2. Participant Survey Instrument

Training Follow-up Survey
Corporate Training & Development
ESSENTIALS OF MANAGEMENT

Corporate Training & Development is interested in knowing how well you have been able to take what you learned in this course and put it into practice back on the job. Would you please take a minute to complete this brief survey? We would appreciate your response by: ____________. Thank you for your time.

Dates of program attended:

1. Please check the skills or learnings you have put into practice back on the job since attending this program:

   __ Feedback __ Delegation __ Meyers-Briggs __ Coaching __ Motivation
   __ Conflict Management __Other

   Please provide a specific description of how you applied this skill or learning on the job:

2. Please check the statement that best describes the outcome you have achieved by putting into practice the skills and learnings you described above.

   __ Increased productivity - please describe this result and the dollars gained by the increase.

   __ Process improvement - greater efficiency, faster turnaround, better customer service. Please describe the improvement and specify dollars saved.

   __ Decreased turnover - You retained an employee you were expecting to terminate or demote. Please specify dollars saved by not hiring a new employee.

   __ Other - please describe and specify dollars saved.

Outcome Verification There are two main questions in this phase of the COT process: (1) "Did the outcomes really occur as reported by the participant?" and (2) "Would the outcomes have occurred without the program?"

To answer the first question, we consulted the program's stakeholders. In this case, the stakeholders were the managers of the participants. These managers are responsible for holding the participants accountable for how well they manage and supervise; as such they have direct motivation for observing the participants back on the job to assess the extent to which new skills are being put into practice.

To collect data from participant managers, an e-mail survey similar to the one used for the participants was developed and sent to the managers of 100 participants. A response turnaround of 72 hours was again requested; the response rate was 30%.

To answer the second question, evaluators conducted in-person interviews with managers of groups of employees who attended the program as well as HR representatives of selected business units where the participants work. The goal of the interviews was to determine what organizational dynamics may have influenced the participants' perception of the impact of EOM, (e.g. attendance at similar programs around the time they attended EOM, halo effect, environmental factors that reinforce or inhibit use of the skills addressed in the program, etc.). Results of the interviews indicated that there was no single factor identified that had a unilaterally significant effect on outcomes produced by the application of EOM skills.

Outcome Valuation The primary question in this phase is, "How much are these outcomes worth?" In the case of EOM, the program's intended outcomes are management behaviors whose effect on business outcomes are secondary, tertiary, or beyond. For instance, coaching an employee effectively may improve a specific aspect of that employee's job performance. In turn, the improved job performance may effect a chain of actions that ultimately bear upon business results. Management behaviors are part of a complex network of factors that influence business outcomes. While there is widespread agreement that skilled managers are critical to business success, attributing the practice of a specific management behavior to a specific business outcome is a difficult judgment. Participants in EOM and their managers were given the option to describe business outcomes of participation in the program in terms of (1) Productivity improvement, (2) Process improvement, or (3) Decreased turnover. The surveys asked the participants to estimate the dollars saved or realized using their best judgment. Participant managers were asked, both via survey an in-person interviews, to verify the dollar figures reported by the participants.

Outcome Report The actual outcome report is presented in Figure 3. The report was designed for the primary stakeholders of the EOM program: senior HR management, the training team, and HR professionals who need to assess training needs of groups and individuals in their respective business units. The report summarizes the outcomes in abbreviated and narrative forms.

Results of the Implementation of the COT at CIGNA

The Outcome Inquiry phase yielded information that strongly indicated that participants in EOM left the program and made good faith efforts to implement the skills addressed in the program back on the job. Data addressing the level of on the job implementation of feedback and delegation were particularly strong: 89% and 62% respectively. Usage percentages in the remaining skills ranged from 54% to 46%. Given, as described in the Outcome Definition section, that any application of these skills back on the job would be considered an achievement of intended outcomes, the data from the program participants indicate that such an achievement took place. Outcome Verification data from participant managers provided a second perspective on the job skill applications that was generally consistent with the implementation levels provided by the participants. The results suggested that skills that were presented in a highly structured format (feedback, delegation) were more likely to be reported as implemented than those presented more conceptually.

Evaluation team members reported that assigning dollar values to skill implementation was difficult. In some isolated cases, specific dollar savings were estimated based on savings from the elimination of turnover. These dollar figures were based on established company costs associated with hiring and training a new employee. Participants also identified additional outcomes that do not have an assignable financial value, but do secondarily affect business outcomes, e.g. better morale, better time utilization. Other business outcomes were reported that, in principle, have an assignable financial value, but there was insufficient data available to accurately specify a dollar figure, (e.g. better time utilization, backlog reductions, quality improvement). One exception included a

Figure 3. Critical Outcome Evaluation Report for Essentials of Management

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Program: "Essentials of Management"
Dates: 1997
Participants: 90 Managers

Program Description:

"Essentials of Management" is an intensive three-day program introduction to basic management concepts and skills. It is sponsored and delivered by the corporate training function and is targeted to the new manager with six to eighteen months of experience. The program is mandatory for managers in the target population across all lines of business as well as staff functions.

Outcome Summary:

In summary, the 1997, "Essentials of Management" programs were very effective. See page two for a further breakdown of these results and contact Lawrence Quartana if you wish additional information.

OUTCOMES	OUTCOME VALUE
Cost Savings attributed to application of communication skills	**$188,000**
Cost Savings attributed to turnover reduction	$20,000
Improved time utilization	Significant improvement
Improved quality of claims processing	Significant improvement
Improved production, decreased rework, backlog reduction	Significant improvement

Stakeholder Distribution List:

- President
- Sr. V.P. of Sales & Mktg.
- V.P. of National Accounts
- V.P. of HRD

PROGRAM OUTCOMES

Source of Data: Program participants

Reported Outcomes: Participants reported active implementation of skills learned in the program back on the job. The percentage of participants who reported implementing each skill is: Feedback 89%; Delegation 62%; Coaching 54%; Conflict Management 46%; Motivation 46% 98% of participants reported implementing at least two skills on the job.

VERIFIED PROGRAM OUTCOMES

Source of data: Participant's managers

Verified outcomes: Management gave explicit verification of $188,000.00 in cost savings that resulted from application of communication skills addressed in the program.

Management was rarely in a position to directly observe application of skills learned in the program. Management was able to observe the outcomes of skill implementation. Outcomes observed include: Increased confidence, improved morale, reduced stress, and reduced overt conflict

Management was unable to verify or deny cost savings realized by reduced turnover.

VALUE OF PROGRAM OUTCOMES:

MONETIZED BUSINESS RESULTS:

- A cost savings of $188,000.00 directly verified by management, was realized by a specific implementation of communication skills learned in the program.
- Reduced turnover resulting in approximately $20,000.00 in savings was reported by participants; management did not report awareness of this cost savings, but it was not denied.
- Participants and managers had difficulty assigning a dollar value to most outcomes, though most expressed confidence that some business value was realized.

NON-MONETIZED BUSINESS RESULTS:

Non-monetized business results that were reported and verified included: Better time utilization, improved quality (claims processing), decreased backlog (claims processing), improved morale, and reduced rework.

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significant cost savings ($188,000.00) that was specifically attributed to implementation of EOM skills. The attribution was verified by the participant's manager.

Data Analysis The analysis of data in this application of the COT was fairly straightforward. Quantitative data were tabulated by category of outcome (see Figure 3). Qualitative data, in most cases, were presented by respondents to further substantiate achievement of a given outcome (e.g., provide an example of the application of the skill).

In some instances, qualitative date were coded and categorized. For example, several managers observed the outcome of skill implementation such as conflict management. In this case the number of managers reporting specific examples was aggregated. Coding of responses was facilitated by the fact that categories of responses were supplied (see Figure 3). For responses that were not assigned a category, one was created post-hoc by the analyst. Responses which were connotatively similar (e.g., "increased confidence" and "improved self assurance") were counted and categorized together according to the analyst's criteria. This approach, albeit non-foolproof, is desirable as we lack procedures to differentially weight separate reports of outcomes (Weber, 1990).

Discussion and Conclusions

There are several overall learnings from this pilot application of the Critical Outcome Technique to the Essentials of Management program, a basic generic training program to personnel across multiple functions:

- The COT demonstrated that the intended outcomes of the program were achieved and verified by the participants' managers;
- The COT demonstrated that business outcomes attributable to participation in EOM could be identified. In some cases, plausible estimates of dollar values were possible; and
- This application of the COT achieved the goal of providing results information that is useful to program stakeholders (rather than precise measurements of total effects).

In short, the EOM program did what it was designed to do: provide participants with baseline development in core management practices. The levels of implementation of the skills addressed in the program speak not only to the effectiveness of the program's design and delivery, but also to the presence of environmental factors that encourage the use of these skills on the job.

Apart from the evaluation of the EOM program, this application of the COT lead us to several conclusions regarding its use in practice. These conclusions coincide roughly with the steps in the overall process model; however, none of these learnings are independent from one another.

In the "Outcome Definition" step of the model, the evaluation team found it difficult to discriminate between critical and non-critical outcomes as defined by the technique. It was the case in this application that several non-critical outcomes were stated as critical outcomes. Critical outcomes are actual outcomes of the application of skills or knowledge ascertained in an HRD program. Merely using a skill from a program (e.g., a feedback technique) should not constitute attainment of a critical outcome. Admittedly, there are a number of factors which affect performance outcomes. However, we emphatically note that the purpose of the COT is not to isolate precise changes in individual performance or productivity indices, rather it is a tool to help decision makers determine the general effectiveness of HRD programs.

Additionally, with this application of the COT, we have also learned to refine our data gathering techniques to get information that is more closely aligned with the COT model. In step two, "Outcome Inquiry," we learned that asking participants to cite intended outcomes did little to further our intended purpose which was to ascertain business results, or critical outcomes. Critical outcomes, as stated above, are outcomes which relate to the financial aspects of an organization such as: elimination of grievanances, reduced meeting time, reduced cycle time, reduced turnover, increased sales, etc.

With respect to step three, "Outcome Verification," getting information from the participant's managers regarding factors mitigating the application of skills learned in EOM was a difficult process. Not surprisingly, a large proportion of these managers were not used to thinking in terms of other potential causes of behavior. In order to improve our ability to refine this portion of the process, better data gathering tools will be designed. Additionally, it may be valuable to ask a sample of participants regarding factors which may have mitigated their attainment of critical outcomes in the "Outcome Inquiry" step.

With regard to step five, "Outcome Report," we believe it will be important in future applications of the COT to include a financial benefits framework (e.g., Mosier, 1990). This will help decision makers to quickly assess the value of a program in terms of outcomes relative to costs.

In conclusion, subsequent applications of the COT will be based on revised descriptions of the purpose and process of each of five process steps so as to increase the efficiency and effectiveness of the COT.

References

Bassi, L., Benson, G. & Cheney, S. (1996). The tope ten trends. In Trends: Position Yourself for the Future, Alexandria: ASTD Press, 2-16.

Mosier, N. (1990). Financial analysis methods and their application to employee training. Human Resource Development Quarterly, 1(1), 45-71.

Swanson, R. A. (1994). Analysis for improving performance: Tools for diagnosing organizations and documenting workplace expertise. San Francisco: Berrett-Koehler.

Swanson, R. A. (1996). Performance-learning-satisfaction evaluation system: The application of the three domain evaluation model to performance improvement, human resource development, organization development, and personnel training and development. St. Paul: University of Minnesota Human Resource Development Research Center.

Swanson, R. A. & Mattson, B. W. (1997). Development and validation of the critical outcome technique. In R. Torraco (Ed.) Academy of Human Resource Development 1997 Annual Proceedings, 64-71.

Weber, R. P. (1990). Basic content analysis. Newbury Park: Sage.

Investments in Intellectual Capital: Developing Methods for Measuring Impact and Value of HRD

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The measurement and evaluation of intellectual capital is an issue which holds a crucial role for the field of HRD. Yet, most organizations have only a dim notion of what they spend on human capital, let alone what they receive from those investments. Evidence from a national cross-industry survey of over 500 organizations reveals preliminary, yet tantalizing evidence of a link between investments in human capital and organizational measures of performance, including market-to-book value.

According to some observers the industrial era's successor -- the information age -- is already at or past the midpoint of its life cycle. The ever-declining cost of processing information has made it ubiquitous. Indeed, information has become a commodity that is readily bought and sold. As a result, it is no longer sufficient to define competitive advantage. Hence the rapidly growing interest in intellectual capital as the "new" source of competitive advantage.

At some level, this is nothing new at all. A firm's intellectual capital -- the brains and know-how of its employees (i.e., human capital), and the processes and customer knowledge that they create-- has always been a source of competitive advantage. And by extension, so too has been human resource development (HRD) -- the processes by which a firm develops and leverages its human capital. What is unique about the era that we are entering is that intellectual capital is the only source of competitive advantage within a growing number of industries.

With the benefit of hindsight, it is apparent that in the post-industrial era, creating and leveraging intellectual capital is the business of business. By all available measures, the stock market is already providing handsome rewards to companies that successfully leverage their intellectual capital-- a phenomenon that will almost surely grow in significance as knowledge-based organizations increase in size and numbers. A few firms are anticipating this and looking to enhance, measure and manage their employees' skills and knowledge more effectively, thereby attracting the capital needed for growth.

What Isn't Measured Isn't (Well) Managed

One of the largest impediments to managing intellectual capital, especially human capital, lies in the area of measurement. Initiatives to manage human capital, on the whole, are hampered by a lack of sound methods for measuring the value and the impacts of investing in human capital. Most firms have, at best, only a dim notion of their human capital assets and investments. Standard accounting systems do not allow for easy estimation of human capital investments, even after they have been clearly identified. Sound measurement requires formalized information sharing, common definitions and metrics, and shared measurement methodologies, none of which can be overcome by market forces or the work of isolated organizations.

Measuring the value of human capital is, of course, but the first step in beginning to manage it effectively. Much more important -- but impossible if basic measurement systems have not been put in place -- is evaluating the effectiveness of alternative human capital management

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activities. Yet, we are acutely aware that most economic decision-makers know very little about the effectiveness of those activities. Two results are almost inevitable: 1) economic organizations will under-invest in their human capital, and 2) many of the investments that they do make will be ineffective.

The important point, however, is that the ultimate purpose of developing sound methods for evaluating the impacts of human capital is to generate the information needed for continuously improving its value. While such information may not be needed in an environment where spending on human capital is typically viewed as a cost, it is essential when it becomes a strategic investment.

This paper summarizes our current research on the measurement of the impact and value of human capital investments. Over the last few years, ASTD has been engaged in efforts to develop methods for collecting data on investments in workplace training and development, measuring that investment, and relating these measures to performance outcomes. We report on the findings from the first round of data collected through an ongoing national survey of training and development practices. In particular, we share results from analyses of 70 publicly traded firms to examine linkages between their human capital investments and overall company performance.

Measuring the Impacts of Human Capital

Human capital is distinct from other forms of intellectual capital in that it is the one type of capital that modern corporations cannot buy or sell. Although it may be questionable to include human capital when valuing a company's intellectual capital, it does nevertheless create value which the organization can claim. Paradoxically, despite the growing importance of human capital to firms' survival, corporate investment in human capital--such as basic skills, quality training, or funding for continuing education or professional development--is rarely measured, and little is known about the value produced by such investments.

In terms of measuring firms' investments in the creation of human capital assets, the best available evidence suggests that in 1995, the average U.S. employer spent approximately 0.9 percent of payroll on education and training--a figure that appears to have changed almost imperceptibly since 1983 (the only other year for which a roughly comparable estimate is available).[1] While corporate accounting systems contain detailed and extensive measures of investments in the areas of physical capital and research and development, and also provide methods for measuring intangibles such as corporate goodwill, human capital investments rarely appear on corporate balance sheets. And when they do appear, it is in the form of an expenditure--not an investment.

Even less attention is paid to developing measures for evaluating the effects of investments in human capital. Because of its inadequate measurement, researchers know little about the effectiveness of firms' investments in people. Equally important, corporations themselves know little about the effectiveness of these investments. Ideally, they would know what forms of training or education are most effective for different types of workers in different industries and in various situations. They would be able to measure the return on their human capital investments, as well as the effect of such investments on overall corporate performance.

Thus, while human capital investment is important to society as a whole, to individuals, and to firms, the individuals who are responsible for managing corporate investments and seeking performance improvements lack the information they need to make wise decisions on effective investments in human capital. Many are further buffeted by market forces that push them to cut "costs" like human capital investment in order to improve short-term profitability. Despite its importance, therefore, human capital investment is likely to be under-provided, with significant consequences for the economic efficiency as well as the economic well-being of employees.

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[1] See Bassi, Gallagher, Schroer (1996), page 121. This is figure is based on direct costs only. Although the inflation-adjusted total expenditure estimate increased by 18 between 1983 and 1995, the labor force grew by 19 percent during that same time period (*1996 Economic Report of the President*, page 316), suggesting virtually no change in training expenditures as a percent of payroll.

Research Review

Before describing our research on the measurement of the impact and value of investments HRD, we review how the link between the management of human capital and performance in general has been examined previously. Boudreau and Ramstad (1996) identify two distinct approaches to measuring human capital: 1) measuring the effects of individual human resource "programs" (practices), and 2) associating "bundles" of HR practices with organizational outcomes.

Studies that have examined the effects of investing in various individual human resource practices are numerous. One source of such studies is internal company research. The Adolph Coors Company found anywhere from 124% to 833% return on investment from its wellness promotion program (Bunch, 1992). McDonnell Douglas reported savings of $6 million from its employee assistance programs (Stuart, 1993). Academic studies are a second source of research on the impacts of individual practices. For example, Tepstra and Rozell (1993) found significant links between recruitment and selection procedures and firm profits. Studies specifically focused on HRD by Bartel (1995), Bishop (1994), and Russell, Terborg, and Powers (1985) have also shown relationships between such investments and either employee or firm performance.

Recently, studies which examine the extent to which human resource practices are integrated into holistic systems have also appeared which show such systems may produce greater effects than the sum of the effects of their individual practices. Research within particular industries, such as automobile manufacturing (MacDuffie, 1995) and steel mills (Arthur, 1994), as well as across broad sample of companies (Huselid, 1995) have found that those with combinations of high-involvement work practice, innovative compensation plans, team-based arrangements, and other practices perform significantly better than their peers. Huselid's research has gone so far as to quantify the effects of such practices in monetary terms.

As Boudreau and Ramstad (1996) point out, such broad studies provide little pragmatic guidance to organizational decision makers about most effective human resource practices in which to invest. They propose a taxonomy of three levels of at which one can measure investments in human capital: 1) the cost and amount of the human capital investments, 2) the immediate effects of those investments on behaviors, attitudes and capabilities, and 3) their impacts on organizational performance. Boudreau and Ramstad make a convincing case that further research on measurement move beyond the first level Having conducted research previously on measuring investments in HRD (e.g., expenditures and types of training) (Bassi and Cheney, 1996), we have recently turned our measurement research efforts in the direction of their levels 2 and 3.

Most organizations believe that workplace training and development is becoming increasing critical to their success. A recent survey by Hackett (1997) reveals that fully 97 percent of training and HR executives from Business Week 1000 companies agree that the significance of training will increase in the future. Yet, only 44 percent of those same executives report that their companies measure the value of their training. A look at their actual measures of value found that only a minority of those firms assessed training's economic value to their organization. Organizations face several obvious obstacles to conducting sound assessments of the value of their training including the sheer complexity of the question, the difficulty of identifying tangible or quantifiable outcomes, and simply the time and effort good measurement requires, just to name a few.

Data and Measures

In the spring of 1997, we administered the first round of an annual survey designed to improve the measurement of human capital investments in the form of training and development and assess their effects on performance, the Human Performance Practices Survey. This survey of a nationally representative sample of 10,000 U.S. establishments was ASTD's first attempt to implement the measurement methodologies we have developed across a wider range of corporations.

The survey focused primarily on measuring firms' investments in education and training, but also collected data on work practices, compensation policies, and subjective measures of organizational performance on the 500 responding firms (a 5% response rate). For publicly-traded firms in the sample (N=70), we matched our data on investments with other publicly-reported corporate investments (physical capital and research and development) and objective measures of corporate performance. These data were used to identify possible relationships among firms' human capital investments and practices, other work practices, and subjective and objective measures of performance.[2]

Investments in education and training were measure in a number of ways. We collected financial data on training as a percent of payroll and training expenditure per employee for 1996 as well as the percent change in the former since 1995. We also measured the percent of employees changed in 1996 and the percent change in this figure from 1995. The final measure we included in our analyses assessed the type of training provided rather than the level. Here we chose to examine the effects of investments in training for technical skills, the fastest growing type of training today.

The full array of subjective and objective performance outcome measures included:

- *Subjective Measures* Respondents were asked to assess whether their organization's performance in 1996 was: (1) better, worse, or no different from 1995, and (2) better, worse, or no different from other organizations that do the same kind of work. Within each of these two categories, respondents were asked to assess six specific aspects of performance, including: ability to retain essential employees, employee satisfaction, quality of product/services, customer satisfaction, sales, and overall profitability. Factor analyses of these performance measures were used to construct two corresponding indices of organizational performance (one for change in performance between 1995 and 1996, and the other for the level of performance in 1996 compared to other organizations).
- *Objective Measures* For the publicly traded corporations in the sample, financial reports were used to construct the following measures for end of 1996 and for the most recently available quarter of 1997: net sales per employee, gross profit per employee, and market-to-book value.

Factor analysis was used to identify several clusters of human resource practices and create corresponding indices:

- *High performance work practices* consisting of employee involvement with management in business decisions, employee access to key business information, and self-directed work teams
- *Innovative compensation practices* consisting of profit sharing or gain sharing, group or team-based compensation, individual incentive compensation, and employee stock ownership plans.
- *Innovative training practices* consisting of train-the-trainer programs, line-on-loan or rotational training staff, training resource center, mentoring or coaching practices, individual development plans, peer review of performance/360 feedback, and training information systems.
- *Competency training practices* consisting of skill certification, documentation of individual competencies, job rotation or cross training, mandatory annual training time, and knowledge or skill-based pay.

Research Results

The data were analyzed in three ways. Using the entire sample of 500 firms, we ran correlations to examine the zero-order relationships between measures of investments in education and training, other human resource practices, and our scales of *subjective* measures of performance. Next, using the sample of publicly traded corporations, we ran correlations on the relationship between investments in education and training, other human resource practices, and the *objective* measures of financial performance in 1996 and the second quarter of 1997. Lastly, a set of preliminary regressions (Ordinary Least Squares) was run on the sample of publicly traded firms, using the financial performance variables as dependent variables, with the education and training investment and human resource practice variables as independent variables.

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[2] Until a longitudinal data base can be developed on a sample of firms, these relationships can only be interpreted as correlational, rather than causal.

Table 1 reports the Pearson correlations from the first analysis. There are more statistically significant correlations than would be expected to occur by chance. There is a significant, positive relationship between both subjective measures of overall performance and companies' use of innovative training practices, high performance work practices, and innovative compensation plans.[3] Both the percent of payroll spent on training and the percent of employees trained are positively correlated with perceived performance in 1996 compared to other organizations that do the same kind of work, but not with change in performance from 1995 to 1996. Instead, change in performance from 1995 to 1996 is positively correlated with change in training expenditure and change in the percentage of employees receiving training.

Table 1: Correlations Between Human Capital Investments and Subjective Performance Measures

	Performance Versus Others Scale	Change in Performance Scale
Training as a % of Payroll 1996	.138*	.033
Percentage of Employees Trained 1996	.098	-.047
Change in Training Expenditures 1995-6	.071	.165**
Change in % of Employees Trained 1995-6	.030	.110*
Innovative Training Practices Scale	.148**	.119*
High Performance Work Practices Scale	.144**	.138**
Innovative Compensation Scale	.127*	.103*
Competency Training Scale	.064	.025
% of Training Devoted to Technical Skills	.002	-.034

* p < .05; ** p<.01.

These results are consistent with *a priori* expectations. The *level* of training (in dollars or people should be expected to be correlated with the *level* of performance (relative to other organizations), but not the change in performance (between 1995 and 1996). Similarly, *a change* in training should be expected to be correlated with *a change* in performance (from 1995 to 1996), but not with the level of performance (compared to other organizations).

The Pearson correlations from the second analysis, between the human capital investment variables and the objective measures of financial performance, are reported in Table 2 below. Because this sample consists only of publicly traded firms that reported for their entire corporation, the sample sizes are quite small (between 35 and 55 depending on the variables under consideration).

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[3] The correlation between the competency training practices scale and the two indices of organizational performance were not statistically significant.

Table 2: Correlations Between Human Capital Investments and Objective Performance Measures

		1996			1997	
	Market-to-Book Value	Net Sales/Employee	Gross Profit/Employee	Market-to-Book Value	Net Sales/Employee	Gross Profit/Employee
Training as a % of Payroll 1996	.431**	.073	.038	.370*	.091	-.019
Training Expenditure per Employee	.319*	.189	.196	.201	.249	.172
Percentage of Employees Trained 1996	.259	.115	.210	.324+	.053	.009
Change in Training Expenditures 1995-6	-.128	.131	.143	.030	.149	.143
Change in % Employees Trained 1995-6	-.316	.250	.113	-.227	.078	-.018
Innovative Training Practices Scale	.066	-.025	.161	.121	.064	.085
High Performance Work Practices Scale	-.028	-.121	-.030	-.065	.037	.147
Innovative Compensation Scale	.142	-.001	.210	.015	-.080	.014
Competency Training Scale	-.013	.026	-.168	.140	-.152	-.257
% of Training Devoted to Technical Skills	.554**	.139	.302+	.707**	.185	.276

+ $p < .10$; * $p < .05$; ** $p < .01$.

Given these very small sample sizes and the range of industries represented, it is not surprising that there are few significant correlations. None of the human resource practices scales (innovative training, high performance work, innovative compensation, quality initiatives, or competence training) was significantly correlated with any of the three financial outcome variables. Interestingly, however, both training as a percentage of payroll and training expenditure per employee were significantly, positively correlated with 1996 market-to-book value. In addition, training as a percent of payroll and the percentage of employees trained were significantly correlated with 1997 market-to-book value (although the latter significance level was marginal). We also find evidence that high market-to-book values correspond to greater investments in technical training.

These are, of course, only correlations. They neither control for other relevant factors, nor prove causality. What is surprising about these correlations, however, is that the training variables achieve statistical significance when other variables (e.g., innovative compensation and high performance work practices) which have been found to be significant by other researchers, are not significantly correlated with financial outcomes.

To isolate the relationship between these human capital investments and market-to-book value, the only outcome with significant zero-order correlations, we ran a series of Ordinary Least Squares regressions. Unfortunately, sample sizes get even smaller, because many observations do not have a complete set of variables for all of the human resource practices. Table 3 reports on a coherent set of regressions of market-to-book value in 1996 and 1997 on the significant correlates identified above (to maximize the N). We also included a control for the durable manufacturing industry which was also found to be highly correlated with market-to-book value in preliminary regressions.

It is of interest that neither measure of the *amount* of human capital investment are significantly related to market-to-book value in 1996 or 1997. Rather it appears that the *type* of training investments made is a more critical determinant of this measure of an organization's intangible assets (as perceived by the market). Firms that provide relatively more technical training than other types of training tend to report higher market-to-book values. Moreover, the percent of technical training has an even larger effect in 1997, suggesting that it's effects on market-to-book value may be lagged by a year or more, and may grow over time.

A third regression, which controls for the 1996 market-to-book value as a predictor of the 1997 value, reveals a great deal of endogeneity. Yet, even in this analysis, percent of technical training retains a highly significant positive effect. This finding, while not conclusive, suggests that the type of training *by itself* in one year may enhance a company's market-to-book value the next year. To show such a causal relationship conclusively, however, requires more data than we currently have at our disposal, both in terms of sample size and years of data. For instance, we cannot rule out the possibility that other factors, such as new leadership, prompted firms to provide more technical training at the same time it enhanced their market-to-book values.

Table 3: Regressions of Market-to-Book Value on Human Capital Investments[a]

	Market-to-Book Value 1996	Market-to-Book Value 1997	Market-to-Book Value 1997
Percentage of Employees Trained 1996	.038	.079	.072
Training as a % of Payroll 1996	-.023	-.016	-.022
% of Training Devoted to Technical Skills	.376*	.656**	.424**
Durable Manufacturing	.469*	.174	-.161
Market-to-Book Value 1996			.664**
R-Square	.538	.600	.815
Adjusted R-Square	.441	.519	.764
F	5.542**	7.485**	15.869**

* p < .05; ** p<.01.

[a] Standardized coefficients shown.

Summary

Clearly, our research results thus far are preliminary, yet tantalizing. We have found evidence that indicates a possible link between organizational investments in human capital and one organizational measure of performance. While previous research has uncovered relationships between such investments and organizational performance, this evidence suggests that the market itself and stakeholders also recognize the value they generate. That value may not show up in the next quarter's financial results, but will contribute to the longevity and long-term success of the organization as it continuously improves the quality of its products and services.

There are still many questions that remain unanswered which we hope our future research will address. Among them is the issue of causality. To unravel this issue, we will be administering our survey research on the organizational value of training and education (i.e., the Human Performance Practices Survey) annually. As the number of organizations that participate increases each year and we develop a set of longitudinal data, we hope to be able to isolate the overall value generated by training and education investments. We also intend to begin to draw the linkages between the individual/job level impacts of training and organizational outcomes. Beginning in 1998, organizations responding to our annual survey will also report on these outcomes using the standard set of measures we have developed. Eventually, it is our hope that organizations will provide assessments of these "middle ground" impacts for all of their training and education programs and enable us to assess their collective impact on organizational performance.

We believe that organizations can apply a similar measurement approach to other human resource development activities. In doing so, organizations will be able to assess the true and entire value created by their HRD efforts and their intellectual capital as whole. The journey is likely to long and difficult, but the degree to which organizations can undertake such measurements will in large part determine the extent to which they can optimally leverage their intellectual capital.

References

Arthur, J. B. (1994). Effects of human resource systems on manufacturing performance and turnover. *Academy of Management Journal*, 37, 670-687.

Bartel, A. P. (1995). Training, wage growth, and job performance: Evidence from a company database. *Journal of Labor Economics*, 13 (3), 401-425.

Bassi, L.J. & Cheney, S. (1996). *Restructuring: Results from the 1996 Benchmarking Forum*. Alexandria, VA: ASTD.

Bassi, L.J., Gallagher, A. L., & Schroer, E. (1996). *The ASTD Training data book*. Alexandria, VA: ASTD.

Bishop, J.H. (1994). The impact of previous training on productivity and wages. In L.M. Lynch (ed.), *Training and the private sector: International comparisons*. (161-200). Chicago, IL: University of Chicago Press.

Boudreau, J.W. & Ramstad, P.M. (1996). *Measuring intellectual capital: Learning from financial history*. Ithaca, NY: Center for Advanced Human Resource Studies, Cornell University.

Bunch, D. K. (1992). Coors wellness center – helping the bottom line. *Employee Benefits Journal*, March, 14-18.

Hackett, B. (1997). *The value of training in the era of intellectual capital*. Report No. 1199-97-RR. New York: The Conference Board, Inc.

Huselid, M. A. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of Management Journal*, 38 (3), 635-72.

Kirkpatrick, D.L. (ed.) (1975). *Evaluating training programs*. Alexandria, VA: ASTD.

MacDuffie, J. P. (1995). Human resource bundles and manufacturing performance: Organizational logic and flexible production systems in the world auto industry. *Industrial and Labor Relations Review*, 48(2), 197-221.

Russell, J.S., Terborg, J.R., & Powers, M.L. (1985). Organizational performance and organizational level training and support. *Personnel Psychology*, 38, 849-863.

Stuart, P. (1993). How McDonnell Douglas cost-justified its EAP. *Personnel Journal*, 72, 48.

Tepstra, D.E. & Rozell, E.J. 1993. The relationship of staffing practices to organizational level measures of performance. *Personnel Psychology*, 46, 27-48.

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Demonstrating the Financial Benefit of Human Resource Development: Status and Update on the Theory and Practice

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A serious problem facing the HRD profession is the perception from managers that HRD is not a good investment. Furthermore, a recent study of HRD practices reports that only 3 percent of the programs in HRD are evaluated in terms of financial impact. Yet, the research clearly demonstrates that HRD interventions focused on performance improvement deliver 8:1 return-on-investment in a year or less. This paper reports this financial benefit research and proposes new areas of financial research.

A recent business page headline from London's Daily Telegraph reads "Training falls down on the job Training."(October 27, 1987, p. 31). This report was based on a study of business leaders. The popular perception that HRD costs organizations more than it returns in benefits has haunted the human resource development (HRD) profession since its inception. And, not being able to change this perception is the Achilles heel of HRD. While organizations are more than economic entities-- organizations are economic entities. Any organization that remains alive will ultimately judge each of its components from a return-on-investment (ROI) framework and they will do it with or without valid data.

To face this challenge, four views of HRD have been presented to the HRD profession. They are: (1) a major business process, something an organization must do to succeed, (2) a value-added activity, something that is potentially worth doing, (3) an optional activity, something that is nice to do, and (4) a waste of business resources, something that has costs exceeding the benefits (Swanson, 1995).

The dominant view of HRD is within options 3 and 4 above-- HRD as being an optional activity or having costs greater than its benefits. The simple idea that HRD is not a good investment is popular and entrenched. Economist Paul Krugman (1994) informs us of the dangers of pop economics and the fact that simple ideas [right or wrong] have staying power.

A recent study by the ASTD, the profession's largest practitioner organization, reports that in terms of actual evaluation of HRD programs in the field, "three percent are evaluated for financial impact." (Bassi, Benson, & Cheney, 1996, p. 11). The irony is that ASTD has been the chief advocate of the profession's most widely endorsed evaluation scheme, Donald Kirkpatrick's simple, yet flawed and impotent, four-level evaluation model (Alliger & Janak, 1989; Holton, 1996). Even Kirkpatrick's recent best selling book is void of any elementary economic or psychometric theory (see Kirkpatrick, 1994).

Problem Statement, Historical Framework, and Research Questions

Decision makers in organizations must work up budgets, justify their own salaries, and propose strategies, projects, and programs to top management. Unlike other managers, HRD people tend to resist doing these tasks. The most likely reasons for this are that they originally chose their profession because they were hands-on and people oriented and not inclined toward the financial side of the organization.

A Short History Economic thinking related to human capacity, human expertise, and human effort and the effects of each is disjointed. History provides a fairly consistent notion that there is much to be gained by being purposeful in managing these domains. Throughout history, the ideological responses to capturing the spoils of human expertise have ranged from communes, to slavery, to meritocracies. Whatever the ideology-- "There's money in those skills!"

The importance of increasing one's expertise is confirmed in society's comparisons of educational levels and economic success. Even so, investments in the development of its personnel is still not a clear option for most firms. Organizations can access expertise in ways other than offering development programs. For example, they can hire expertise and/or establish

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the expectation that employees will manage the development of their own expertise. Neither of these two options require an organization to make direct financial outlays for HRD.

For the HRD profession, the "Training Within Industry" project (Dooley, 1945) was a watershed. This 1940-45 massive national performance improvement effort clearly and consistently demonstrated the economic impact of HRD and the required conditions for achieving financial benefits.

In the 1960s and 1970s a renaissance in the profession provided incentive to think more about HRD as an investment. The literature increasingly reported financial analysis methods (FAM) and studies of programs' costs and benefits (Cullen, Sawzin, Sisson, & Swanson, 1976, 1978; Gilbert, 1978; Meissner, 1964; Swanson & Sawzin, 1975). In the 1980s this financial analysis trend continued with a greater focus on costs and the human resource management perspective versus performance improvement (Cascio, 1987; Flamholtz, 1985; Head, 1985; Kearsley, 1982; Spencer, 1986). These company-wide FAMs took an accounting perspective rather than a performance improvement perspective.

To the 1980s, FAM efforts in HRD did not address the decision-making dilemmas faced by organizations at the investment decision stage of their organizational planning. Difficult as it may seem, any organization can conduct an after-the-fact cost-benefit analysis . What was needed was a method for forecasting those costs and benefits, at the point of making investment decisions. The forecasting financial benefits (FFB) of HRD method was designed to fill this gap (Swanson, Lewis, & Boyer, 1982; Swanson & Geroy, 1983; Swanson & Gradous, 1988). The FFB is a practical step-by-step method for making accurate investment decisions based of forecasting (1) the financial value of improved performance projections for a program , (2) the cost of implementing a program, and (3) the return on the program investment (Swanson & Gradous, 1988). The FFB method is best suited to short term HRD interventions purposefully connected to performance deficiencies. The problem facing the FFB method is that it is not as easily applied to large scale change, long-term change, and to interventions loosely connected to performance requirements.

Research Questions The following three questions serve as the basic of this inquiry:

1. What core findings relevant to the financial analysis of HRD have appeared in the literature?
2. What core findings relevant to the forecasting of financial benefits of HRD have appeared in the literature?
3. What new FAM theories and tools have been reported in the literature that HRD should pursue?

Core Financial Analysis Method (FAM)

The core FAM method, based upon several years of research, has proven to be a helpful tool to overcome the difficult and often resisted problem of talking about human resource development in dollar and cents terms (Swanson & Gradous, 1988). The model and method for analyzing actual and forecasted financial benefits are relatively simple and straight forward. They both have three main components: (1) the performance value resulting from the program, (2) the cost of the program, and (3) the benefit resulting from the program.

The basic financial analysis model is:

Performance Value
- Cost
Benefit

The FAM method is an expansion of the three components into three separate worksheets. Readers wishing to receive detailed instruction on the should obtain the author's full text (Swanson & Gradous, 1988). For a broad overview of FAMs in context of HRD, see Mosier (1990). In addition, the bibliography serves to capture important literature related to the financial analysis of HRD beyond just those studies cited directly in this paper.

Five Early HRD Financial Analysis Classics

There is a substantial cache of HRD economic research. Unfortunately, it spread throughout the refereed, non-refereed , HRD, and non-HRD literature and generally is not in the hands of HRD decision makers. Five early classics provide excellent examples. In chronological order, each is briefly abstracted:

1. Dooley, C. R. (1945). The training within industry report, 1910-1945. Washington, DC: War Manpower Commission Bureau of Training, Training Within Industry Service.

While this 330 page report of a massive five-year nation-wide effort is not a research report, it contains data sprinkled throughout on the financial results of sample TWI programs that are worth noting. The refrain of TWI personnel was, "will it fix a production problem?" If not, they did not support the program. When they did support a program, they were able to track the results. The optical lens grinding case study established a $15 value to the quality completion of a grinding task (p. 271-292). At the time, this financial value was quite significant and was magnified by the large number of new workers needed to grind lenses. In another report, improved methods at one arsenal were determined to exceed a savings of $1,000,000.

2. Meissner, F. (1964). Measuring quantitatively the effect of personnel training. Training Directors Journal. 18(3), 230-236.

This study of "simple" work behavior, bagging groceries, compared bagging training to no-training. The underlying premise was that there is a right or optimal way of doing any work and that there are financial consequences to expertise. A major paper manufacturer conducted 20 in-store experiments to determine the cost-effectiveness of a training program in "bagsmanship." The dependent variable was bag costs. The study concluded that there is an 8:1 ROI on the training investment if stores paid for the training materials and 11:1 ROI for stores if the bag supplier paid for the training materials portion of the cost. The further assumption was that the consideration of damaged goods and improved customer relations would increase the ROI.

3. Thomas, B., Moxham, J., & Jones, J.G.G. (1969). A cost benefit analysis of industrial training. British Journal of Industrial Relations, 7(2), 231-264.

This study compared the cost-effectiveness of two alternative forms of general training for clothing machine operators (labeled "new" and "old"). The analysis was based on a comparison of performance among 139 old and 92 new trainee/workers over a four year period. The dependent variables were performance levels, retention, and length of the training period. It was found that the average performance level of new trainee/workers increased as much as 30% during the first year following innovative training and then leveled off. The ratio of benefits to costs over the four year period was 8:1.

4. Swanson, R. A., & Sawzin, S. A. (1975). Industrial training research project. Bowling Green, OH: Bowling Green State University. (also reported later in the literature as: Cullen, G., Sawzin, S., Sisson, G. R., & Swanson, R. A. (1976). Training, what's it worth? Training and Development Journal, 30(8), 12-20).

This controlled experimental study compared structured on-the-job training to unstructured on-the-job training for two groups of 20 semi-skilled extrusion molder operators. The dependent variable was expertise in being able to produce "quality plastic pipe." The results of this study concluded that the training time required to reach competence under unstructured training was significantly higher ($p<.005$) than the structured method (16.3 versus 4.55 hours), structured training workers produced significantly less waste ($p<.01$) and solved significantly more production problems ($p<.025$), and that the financial break-even point in absorbing the development and delivery costs of structured training for trainees (compared to no development and delivery costs of unstructured on-the-job training) was at 10 trainees. Every trainee beyond the 10 represents additional ROI on the existing training investment. Extension of the data to the actual numbers of employees requiring training yielded a 10:1 ROI in a two month period.

5. Rosentreter, G. E. (1979). Economic evaluation of a training program. In R. O. Peterson (Ed.) Studies in Training and Development: Research Papers from the 1978 ASTD National Conference. Madison, WI: ASTD Press.

This financial analysis of an adult education program offered through a community college to company managers focused on communication skills for goal setting. Of the 68 managers, 34 attended the 15 hour communication skills training. The dependent variables were employee turnover, employee punctuality, and grievances. The results in all three domains were compared between the employees reporting to the trained and untrained supervisors. There was no significant difference in the punctuality and numbers of grievances filed between the experimental and control groups. There was a significant difference in turnover that turnover was financially analyzed. Given the financial consequences of the reduced turnover, there was a 9:1 ROI for the communication skills training.

Summary. The research results from these varied studies were quite consistent. They demonstrated that HRD imbedded in a purposeful performance improvement framework yielded very high returns on investments, an ROI of 8:1 or more in a year or less.

From Financial Analysis of Methods (FAM) to Forecasting Financial Benefits (FFB)

There are a substantial number of studies in the realm of *forecasting* the financial benefits of HRD. This FFB literature is also dispersed in the HRD literature. Again, five studies have been identified, presented in chronological order, and briefly abstracted.

1. Geroy, G. D., & Swanson, R. A. (1984). Forecasting training costs and benefits in industry. Journal of Epsilon Pi Tau, 10(2), 15-19.

This study forecasted the financial benefits of a geometric dimension and tolerancing training program for 136 Onan Corporation employees. Using the FFB method, mangers forecasted ROIs of 7:1, 11:1, 11:1, and 22:1. All agreed that the training would be a sound investment for the corporation. The follow-up financial analysis of actual performance of two trained workers yielded a ROI of 27:1 on one and 159:1 on another. This ideal situation had relevant, low-cost training ($80.50 per employee) and high gain application opportunities in the workplace. In this study, the benefits derived from just two employees paid for training all 136 employees and then some.

2. Swanson, R. A. & Gradous, D. B. (1988). Forecasting financial benefits of human resource development. San Francisco: Jossey-Bass.

This comprehensive book puts forth the theory and practice of forecasting the financial benefits (FFB) of human resource development. Also included in the book are eight cases and supporting data from actual organizations. The ROI of all these cases met or exceeded 8:1.

3. Swanson, R. A. & Sleezer, C. M. (1989). Determining financial benefits of an organization development program. Performance Improvement Quarterly, 2(1) 55-65.

This study from a health maintenance organization reports the forecasted and actual performance values, costs, and benefits from a complex company-wide organization development intervention that was combined with an aggressive marketing campaign. The dependent variable was "members." The forecasting portion of the study yielded underestimates of the actual data, but led to valid investment decisions, the purpose of the forecasting method. Thus, this phase further validated the FFB method. In terms of the total actual performance value resulting from the performance improvement effort, two top executives were called upon to estimate the relative contribution of the marketing and organization development components to the total 12.5 million dollar gain. One executive estimated the OD performance value contribution resulting from the $44,590 OD investment as $5,040,000 (11:1 ROI) and the other estimated it to be $7,452,000 (16.4:1 ROI).

4. Jacobs, R., Jones, M., & Neil, S. (1992). A case study in forecasting the financial benefits of unstructured and structured on-the-job training. Human Resource Development Quarterly, 3(2), 133-139.

This case study compared the forecasted financial benefits between unstructured and structured forms of on-the-job training. The setting of a large truck-assembly plant and a focus on three production job tasks resulted in the forecasted structured OJT performance value being twice the performance value of unstructured OJT at the end of an equivalent evaluation period. From a ROI perspective, the forecasted $39.04 average training cost per worker on task #1 resulted in an added average performance gain of $16,065 over the unstructured training option. This resulted in a forecasted 411:1 ROI for the training investment. The forecasted $195.20 average training cost per worker on task #2 resulted in an added average performance gain of $3,174.75 over the unstructured training option. This resulted in a forecasted 16:1 ROI for the training investment. The forecasted $139.40 average training cost per worker on task #3 resulted in a added average performance gain of $8,889.30 over the unstructured training option. This resulted in a forecasted 63:1 ROI for the training investment.

5. Clements, J. C. & Josiam, B. M. (1995). Training: quantifying the financial benefits. International Journal of Contemporary Hospitality Management, 7(1), 10-15.

This case studied applied the FFB method to an actual small hotel franchise disguised as BUDSYS Hotels (they have traditionally relied on the buddy system of training new employees) . The dependent variable was front desk transactions. The case goes on to forecast the performance values, training costs, and benefits of unstructured buddy-system training to a structured selftutorial package. The forecasted $81,000 performance gain from the structured training over the unstructured option represents a forecasted 8.7:1 ROI in three months.

Summary. These studies clearly demonstrate that HRD can be a very sound financial investment. The research further provides evidence that HRD interventions focused on appropriate dependent performance variables and systematically executed will financially forecast and return 8:1 or more. In contrast, there is no evidence that unfocused and unsystematic HRD interventions yield positive returns or returns that even exceed their costs.

Update from Recent Financial Analysis Research

There is a substantial array of new HRD related economic research studies. In chronological order, five selected studies are briefly abstracted along with implications for HRD.

1. D'Aveni, R. A. & Ravensscraft, D. J. (1994). Economies of integration versus bureaucracy costs: Does vertical integration improve performance? Academy of Management Journal. 37(5), 1167-1206.

D'Aveni and Ravensscraft (1994) studied vertical integration, cost structure, and performance at the line-of-business level. They concluded that vertical integration results in overall lowered costs in spite of the additional bureaucratic costs. Vertical integration cost reductions "may arise from transaction-related costs, shared common costs, and enhanced productivity" (p. 1193). The effect on HRD when an organization alters its structure (e.g. vertical integration) is fundamental and the ability of HRD to be central to the organization is dependent on its ability (1) to respond systemically (bureaucratically) and (2) to demonstrate its economic contributions (improvements in transaction-related costs, shared common costs, and enhanced productivity). The structural impact on HRD has to do with alignment with business unit versus having a function and programs that transcend sub-units. While opinions sway over time, the economics of these organization strategies for HRD should be studied.

2. Romanelli, E. & Tushman, M. L. (1994). Organizational transformation as punctuated equilibrium: An empirical test. Academy of Management Journal, 37(5) 1141-1166.

Romanelli and Tushman report that "small change in strategies, structures, and power distributions did not accumulate to produce fundamental transformations" (p. 1141). Their view of revolutionary change largely discounts HRD transformational theories and practices of working from the bottom-up or from the middle-out. They further conclude that the popular cascading model of change within a framework of interdependent relationships actually resists change and prevents small changes in organizational sub-units from taking hold. This and other similar studies challenges the viability of HRD to be a major contributor to the long-term economic vitality of an organization and deserve further research. The results of this line of research would ultimately challenge and refine the mission of HRD and how it positions itself in the organization.

3. Hendricks, K. B. & Singhal, V. R. (1995). Does implementing an effective TQM program actually improve operating performance? Empirical evidence from firms that have won quality awards. Williamsburg, VA: School of Business, College of William and Mary.

This study, sponsored by the US Labor Department, pursues the hypothesizes as to the effectiveness of TQM on firm performance. TQM companies showed significant gains in the dependent variables of operating income and sales growth, capital expenditures, employment growth, and total assets compared to the sample of control group of firms. There were no significant differences in cost control. This study of company-wide implementation of an intensive personnel development intervention (TQM) and the utilization of standard economic performance data over time as compared to a control group of firms casts a large economic analysis net. Comparisons of the economic performance of multiple firms that invest in their human resources compared to those that do not need to be studied by the profession. Such studies would serve to better understand the economic contribution of the human capital to an organization.

4. Lyau, N. M., Pucel, D. J. (1995). Economic return on training at the organization level. Performance Improvement Quarterly, 8(3), 68-79.

This study examined labor-productivity returns from investments in a manufacturing industry and its 237 large and medium-sized firms. Two labor-productivity dependent variables (sales per worker and direct costs of training) and two training investment dependent variables (total training costs and direct costs of training) were studied. A significant relationship between investments in training and labor productivity as measured by value added per worker was found. This is defined as the dollar value of products sold, minus the cost of the materials in those products, divided by the number of workers. On the average, firms increasing their training expenditure by 10% could expect a 1.0% to 1.2% increase in the level of labor productivity. Studies that lead to core generalizations as to the return on company-wide expenditures are needed to advance HRD's status in the operational budgeting process.

5. Swanson, R. A. & Mattson, B. W. (1997). Development and validation of the critical outcome technique(COT). In R. Torraco (Ed.) Academy of Human Resource Development 1996 Annual Proceedings. 64-71.

The COT represents a unique development in post-hoc program evaluation. Until now, the primary avenue of being able to predictably demonstrate the financial results of HRD has been through a systematic development process including up-front performance analysis and systematic evaluation. The COT is conceptually similar to the famed Critical Incident Technique in that it functions within the milieu of an ongoing organization while yielding critical outcome data. The five steps include (1) outcome verification, (2) outcome inquiry, (3) outcome verification and attribution, (4) outcome valuation, and (5) outcome report (see Swanson, 1996; Mattson, Quartanna, & Swanson, 1998). Metaphorically, the COT is a "strategy for finding the needle [financial performance] in the haystack [organization]" and could be an appropriate and powerful tool for validating the financial impact of certain HRD interventions.

Summary. Each of these studies provide a challenge and opportunity in the financial analysis of HRD benefits. Furthermore, each is worthy of further research.

Conclusion

Economics has been purported to be one of the foundational theories of the HRD discipline. As such, it is critical to continually update the status of the economic theories and practices relevant to HRD. While the existing FAM methods available to the HRD profession are too rarely used , updating the theory and methodology may serve to change this condition.

Bibliography

Addicott, P. (1991). ROI model gives training new respected cost justification. Training Director's Forum Newsletter , 7(6), 4-5.

Alliger, G., & Janak, E. (1989). Kirkpatrick's levels of training criteria: Thirty years later. Personnel Psychology, 42(2), 331-342.

Bassi, L., Benson, G. & Cheney, S. (1996). The top ten trends. In Trends: Position Yourself for the Future, Alexandria: ASTD Press, 2-16.

Arvey, R., Maxwell, S., & Salas, E. (1992). The relative power of training evaluation designs under different cost configurations. Journal of Applied Psychology, 77(2), 155-160.

Becker, G. S. (1993). Human capital: A theoretical and empirical analysis with special reference to education- 3rd edition. Chicago: University of Chicago Press.

Blomberg, R. (1989). Cost-benefit analysis of employee training: A literature review. Adult Education Quarterly, *39* (2), 89-98.

Brinkerhoff, R. (1987). Achieving results from training. San Francisco: Jossey-Bass.

Bohan, G., & Horney, N. (1991). Pinpointing the real cost of quality in a service company. National Productivity Review, 10(3), 309-317.

Boudreau, J. W. & Ramstad, P. M. (1996). Measuring intellectual capital: Learning from financial history. Ithaca, NY: Cornell University Center for Advanced Human Resource Studies.

Brethower, D. (1993). Strategic improvement of workplace competence II: The economics of competence. Performance Improvement Quarterly, 6(2), 29-42.

Campion, M., & McClelland, C. (1993). Follow-up and extension of the interdisciplinary costs and benefits of enlarged jobs. Journal of Applied Psychology, 78(3), 339-351.

Carnevale, A., & Schulz, E. (1990). Return on investment: Accounting for training. Training and Development, 44(7), s1-s32.

Cascio, W. F. (1987). Costing human resources: The financial impact of behavior in organizations. Boston: PAWS -Kent Publishing.

Clements, J. C. & Josiam, B. M. (1995). Training: quantifying the financial benefits. International Journal of Contemporary Hospitality Management, 7(1), 10-15.

Cullen, G., Sawzin, S., Sisson, G.R., & Swanson, R.A. (1976). Training, what's it worth? Training and Development Journal, 30(8), 12-20.

Cullen, G., Sawzin, S., Sisson, G.R., & Swanson, R.A. (1978). Cost effectiveness: A model for assessing the training investment. Training and Development Journal, 32(1), 24-29.

The Daily Telegraph (1997, October 27). Training falls down on the job. The Daily Telegraph, p. 31.

D'Aveni, R. A. & Ravensscraft, D. J. (1994). Economies of integration versus bureaucracy costs: Does vertical integration improve performance? Academy of Management Journal. 37(5), 1167-1206.

Demeuse, K.P & Liebowitz, S. J. (1981). An empirical analysis of team building research. Group and Organizational Skills, 6(3), 357-378.

Dixon, N. (1990). The relationship between trainee responses on participant reaction forms and posttest scores. Human Resource Development Quarterly, 1(2), 129-137.

Dooley, C. R. (1945). The training within industry report, 1910-1945. Washington, DC: War Manpower Commission Bureau of Training, Training Within Industry Service.

Edvinsson, L. & Malone, M. (1997). Intellectual capital. New York: HarperBusiness.

Fitz-Enz, J. (1990). Human value management. San Francisco: Jossey-Bass.

Flamholtz, E.G. (1985). Human resource accounting. San Francisco, CA: Jossey-Bass.

Geroy, G. D., & Swanson, R.A. (1984). Forecasting training costs and benefits in industry. Journal of Epsilon Pi Tau, 10(2), 15-19.

Gilbert, T. E. (1978). Human competence. New York: McGraw-Hill.

Hartz, R., Niemiec, R., & Walberg, H. (1993). The impact of management education. Performance Improvement Quarterly, 6(1), 67-76.

Head, G. E. (1985). Training cost analysis. Washington, D.C.: Marlin Press.

Hendricks, K. B. & Singhal, V. R. (1995). Does implementing an effective TQM program actually improve operating performance? Empirical evidence from firms that have won quality awards. Williamsburg, VA: School of Business, College of William and Mary.

Holton, E. F. (1996). The flawed four-level evaluation model. Human Resource Development Quarterly, 7(1), 5-21.

Hornbeck, D. & Salamon, L. (1991). Human capital and America's future: An economic strategy for the 90's. Baltimore: Johns Hopkins Press.

Hronec, S. M. (1993). Vital signs: Using quality, time, and cost performance measurements to chart your company's future. New York: AMACON.

Jacobs, R., Jones, M., & Neil, S. (1992). A case study in forecasting the financial benefits of unstructured and structured on-the-job training. Human Resource Development Quarterly, 3(2), 133-139.

Kaplan, R. & Norton, D. (1996). The balanced scorecard. Boston: HBR Press.

Kearsley, G. (1982). Costs, Benefits, productivity in training systems. Reading, Mass: Addison-Wesley Publishing.

Kirkpatrick, D. L. (1994). Evaluating training programs: The four levels. San Francisco: Berrett-Koehler.

Krugman, P. (1994). Peddling prosperity. New York: Norton.

Lyau, N. M., Pucel, D. J. (1995). Economic return on training at the organization level. Performance Improvement Quarterly, 8(3[illegible] 58-79.

Mattson, B. W., Quartanna, L. J., & Swanson, R. A. (1998). Assessing the business results of management development using the critical outcome technique at CIGNA Corporation. In R. J. Torraco (Ed.) Academy of Human Resource Development 1998 Annual Proceedings. Baton Rouge: AHRD.

Mincer, J. (1962). On-the-job training: Costs, returns, and some implications. Journal of Political Economy, 52(5), part 2, 50-79.

Mosier, N. (1990). Financial analysis methods and their application to employee training. Human Resource Development Quarterly, 1(1) 45-71.

Nicholas, S. & Langseth, R.W. (1982). The comparative impact of organization development interventions on hard criteria measures. Academy of Management Review, 7(2), 531-542.

Ostroff, C. (1991). Training effectiveness measures and scoring schemes: A comparison. Personnel Psychology, 44(2), 353-374.

Phillips, J. (1994). In action: Measuring return on investment. Alexandria, VA: ASTD Press.

Romanelli, E. & Tushman, M. L. (1994). Organizational transformation as punctuated equilibrium: An empirical test. Academy of Management Journal, 37(5) 1141-1166.

Rosentreter, G. E. (1979). Economic evaluation of a training program. In R. O. Peterson (Ed.) Studies in Training and Development: Research Papers from the 1978 ASTD National Conference. Madison, WI: ASTD Press.

Schneider, H., Monetta, D., & Wright, C. (1992). Training function accountability: How to really measure return on investment. Performance & Instruction, 31(3), 12-17.

Sleezer, C. (Ed.). (1989). Improving human resource development through measurement. Alexandria, VA: ASTD Press.

Schmidt, F.L., Hunter, J.E., McKenzie, R.C., & Muldrow, T.W. (1979). Impact of valid selection procedures on work-force productivity. Journal of Applied Psychology, 64, 609-626

Schmidt, F. L., Hunter, J. E., & Pearlman, K. (1982). Assessing the economic impact of personnel programs on work-force productivity. Personnel Psychology, *35*, 335-347.

Schmidt, F.L., Hunter, J.E., Outerbridge, A.N., & Trattner, M.H. (1986). The economic impact of job selection methods on size, productivity, and payroll costs of the federal work force: An empirically-based demonstration. Personnel Psychology, 39, 1-30.

Spencer, L. M. Jr. (1986). Calculating human resource costs and benefits. New York: Wiley Publishing.

Stern, P. (1995). An analysis of the model for evaluating HRD programs from the book : Forecasting financial benefits of human resource development. St. Paul: University of Minnesota Human Resource Development Research Center.

Swanson, R. A. (1989). Everything important in business is evaluated. In R. Brinkerhoff (Ed.) New Directions in Program Evaluation - Evaluating Training Programs in Business and Industry. San Francisco; Jossey-Bass, 44, 71-82.

Swanson, R. A. (1992). Demonstrating financial benefits to clients. In H.D. Stolovitch & E.J. Keeps (Eds.) Handbook of Human Performance Technology, San Francisco: Jossey-Bass. 602-618.

Swanson, R. A. (1996). PLS evaluation system: Sales communication case study. In E. Holton (Ed.) Academy of Human Resource Development 1996 Annual Proceedings. 718-725.

Swanson, R. A. (1997). Human resource development: Performance is the key. Human Resource Development Quarterly. 6(2), 207-213.

Swanson, R. A. & Geroy, G. (1983, August). Economics of training. Paper presented to the International Federation of Training and Development Organizations, Amsterdam, Netherlands.

Swanson, R. A., Lewis, D.R., & Boyer, C.M. (1982). Industrial training and economic evaluation. Program Development and Evaluation in the Private Sector. Oslo, Norway: Norwegian National Academy of Banking.

Swanson, R. A. & Geroy, G. (1988). Forecasting the economic benefits of training. In P. Goldstein (Ed.), 1987 Annual: Developing Human Resources. San Diego, CA: University Assoc.

Swanson, R. A. & Gradous, D. B. (1988). Forecasting financial benefits of human resource development. San Francisco: Jossey-Bass.

Swanson, R. A. & Mattson, B. W. (1997). Development and validation of the critical outcome technique. In R. Torraco (Ed.) Academy of Human Resource Development 1996 Annual Proceedings. 64-71.

Swanson, R. A., & Sawzin, S. A. (1975). Industrial training research project. Bowling Green, OH: Bowling Green State University.

Swanson, R. A. & Sleezer, C. M. (1989). Determining financial benefits of an organization development program. Performance Improvement Quarterly, 2(1), 55-65.

Swanson, R. A. & Sleezer, C. M. (1988). Organizational development: What's it worth? Organizational Development Journal, 6(1), 37-42.

Thomas, B., Moxham, J., & Jones, J.G.G. (1969). A cost benefit analysis of industrial training. British Journal of Industrial Relations, 7(2), 231-264.

Ulrich, D. (1997). Human resource champions: The next agenda for adding value and delivering results. Boston: Harvard Business School Press.

The Beliefs of Managers as Facilitators of Learning in Learning Organizations

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This paper reports some of the findings from a qualitative study which was undertaken to examine the perceptions of managers regarding their beliefs, behaviors, triggers, and outcomes when they serve as facilitators of learning for their employees within learning organizations. Specifically, the findings associated with managers' beliefs will be presented.

Organizations are increasingly being challenged to leverage learning as it has been widely articulated that knowledge creation and continuous learning at the individual, team, and organizational level may be the only source of sustainable competitive advantage (Day, 1994; deGues, 1988, 1997; Nonaka, 1991; Senge, 1993; Slater & Narver, 1994, 1995; Watkins & Marsick, 1993, 1996a, 1996b). Given this increased emphasis on learning, there has been a tremendous interest in the concept of learning organizations, and the capabilities required to build learning organizations. Despite the growing literature that is emerging on the learning organization which offers suggestions about management practices that facilitate organizational learning, Ulrich, Von Glinow and Jick (1993) contend that "to date, there have been far more 'thought papers' on why learning matters than empirical research on how managers can build learning capability" (p. 59). Therefore, research is needed which specifically investigates the processes and behaviors associated with facilitative management.

The concept of facilitative leadership within learning organizations is also a radical departure from the command and control style of leadership and management that has typically prevailed in traditional organizations. This new style of leadership and management must shift from a command and control orientation to a facilitate and empower orientation in which leaders and managers focus on the development of their people and on facilitating their learning. While the notion of learning within learning organizations has received considerable attention, the teaching component has largely been ignored (French & Bazalgette, 1996).

Although numerous scholars have suggested that leaders and managers will play an important role in building learning organizations (Senge, 1990a, 1990b; Slater, 1995; Slater & Narver, 1994, 1995; Watkins & Marsick, 1993, 1996a, 1996b), their conceptions and descriptions of these roles differ. It has been acknowledged that leaders and managers will assume roles as teachers (Senge, 1990a, 1990b; Wisdom & Denton, 1991), coaches (Conger, 1993; Evered & Selman, 1989; Frohman, 1978; Marsh, 1992; Rosow & Zager, 1990), educators (Antonioni, 1994), and facilitators (Weaver & Farrell, 1997). Kanter (1989), however, asserts that "theorists have given scant attention to the dramatically altered realities of managerial work in these transformed corporations" (p. 85), and little empirical research has examined this apparent redefinition of managerial roles. Additionally, studies on managerial behavior often do not capture the rationale that managers use in engaging in their work. Fisher (1989) has suggested that it may be helpful to separate the various aspects of the management role into two categories. These categories represent those aspects which are observable, such as behaviors, and those that are not observable. The unobservable elements represent the core beliefs of the manager "which provide the essential clues through which the consistency of even seemingly inconsistent behaviors can be understood" (p. 36).

The current study was undertaken to address the research challenges outlined by Slater and Narver (1994) and Ulrich, Von Glinow and Jick (1993) with respect to empirically investigating the facilitative managerial actions associated with building learning organizations. The purpose of this qualitative study was to examine the perceptions of managers regarding their beliefs, behaviors, triggers, and outcomes when they serve as facilitators of learning for their employees within learning organizations. This research was guided by four questions:

(1). What are the managers' beliefs about their role as facilitators of learning?
(2). What triggers the managers to engage in a learning episode?

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(3). What are the role dimensions and related behaviors that contribute to the role of managers as facilitators of learning?
(4). What are the consequences for managers and learners associated with the learning episode?

This paper, however, specifically reports the findings associated with question one regarding managers' beliefs about their role as facilitators of learning.

Conceptual Framework

An adaptation of the Campbell, Dunnette, Lawler, and Weick model (1970) and Clawson's (1992) Person-Role Model formed the conceptual model which served as the framework for the study. The Campbell et al. model, the person-process-product model (Morse & Wagner, 1978), is a heuristic model which is a schematic portrayal of factors determining the expression of managerial behaviors. The person in this model refers to the manager's individual characteristics and abilities, the product refers to the outcomes and the process refers to the manager's on-the-job behaviors and activities. Their model makes it apparent that the manager's behavior is directed by many different factors and by the interactions between them. Clawson's model differs slightly with the addition of multiple behaviors which form role dimensions.

In this adapted model, the manager's individual attributes, belief system and developmental experiences are thought to influence the manager's adoption of the role of facilitator of learning. In serving as a facilitator of learning, it was thought that managers engaged in learning episodes with employees that are initiated by triggers, or catalysts for learning. The manager's behaviors during the learning episode were identified and collapsed into dimensions which help to define the role of facilitator of learning. It was anticipated that consequences would be associated with the learning episodes for learners, the manager and possibly the organization. This model was furnished as a point of reference, a boundary for the study, but was not empirically tested. Question one is the focus of this paper.

Research Design and Methodology

The design of the research study was a descriptive qualitative approach using the Critical Incident Technique (Flanagan, 1954) and semi-structured interviews as the primary methods of data collection.

In Action: Creating the Learning Organization (Watkins & Marsick, 1996b), a casebook published in 1996 by the American Society for Training and Development served as the population from which a purposeful sample of five organizations was drawn. Four organizations actually participated in the study, and through an expert nomination process, twelve managers were recommended to the researcher as being exemplary facilitators of learning within their respective organizations. The twelve managers agreed to participate in the study, and in-depth personal interviews were conducted with each manager. At a minimum, these interviews averaged at least two hours in length. The managers were asked to describe at least four effective and/or ineffective critical incidents when they thought they served as facilitators of learning for their employees, which led to a total of fifty-six critical incidents. The interviews were tape recorded and transcribed verbatim by the researcher.

Content analysis was employed to analyze the data. The unit of analysis was the critical incident. The major components of the conceptual model guiding this study, Beliefs, Triggers, Behaviors, and Outcomes became the organizing framework to begin sorting the data. Through a process of content analysis and open coding, the researcher thematically analyzed the critical incident data. A total of eight hundred sixty-six data strips were derived from the data set meeting the definitional requirements of the four framework categories. Approaches to data analysis recommended by Guba and Lincoln (1981) and Weber (1990) were rigorously adhered to throughout the data analysis process. In addition to peer and colleague examination, an external reviewer with fifteen years of managerial experience also participated in the coding process. The use of this reviewer helped to establish reliability of emergent themes to achieve semantic validity.

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Completion of the coding process resulted in the thematic classification of critical incident data to address the research questions guiding the study.

Findings

Although several themes emerged from the data set, the findings that follow specifically focus on Beliefs. The framework category of Beliefs was defined as a set of closely held personal assumptions and world views of the manager which guide his or her reasoning and action. A total of 311 beliefs were reported by the managers which formed six clusters of beliefs, and several themes emerged within each cluster. Table 1 depicts these six clusters.

Table 1. Clusters of Managers' Beliefs

Manager Belief System:	
Beliefs About Roles	Beliefs About Learners
Beliefs About My Personal Capabilities	Beliefs About the Learning Process
Beliefs About General Capabilities	Beliefs About Learning

Although several themes emerged within each cluster, one of the most significant clusters of beliefs related to managers' beliefs about their roles as depicted in Table 2 and will be the central focus of this paper.

Table 2. Beliefs About Roles

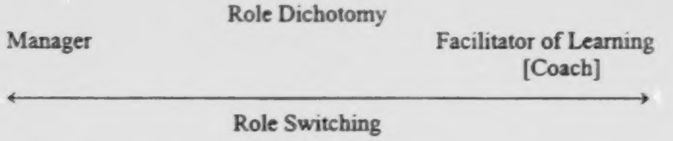
Beliefs About Roles
My Role is to Facilitate Learning and Development -- This is What I Do
The Difference Between Coaching and Management -- Role Distinction
Management is Telling People What to Do
Coaching is All About People -- Helping Them Grow and Develop

Beliefs About Roles. Managers reported four related, but distinct views about their roles. The most dominant theme was their perception about their current role as being facilitators of learning. All 12 managers expressed their role and related responsibilities to be helping their employees grow and develop. One manager expressed his perception of his role as a metaphor. He said, "I try to keep things running smoothly. Basically, we have this really high powered technical engine, a maserati, and when you see that maserati running and racing and really impressive, you don't see me driving it, you don't see me as the car or the engine. I'm the mechanic that comes in at night that does the tune ups so that the next day it's running smooth. That's what I do" [M1, p. 17]. Similarly, M10 said, "My job is teaching this to other people. My job is making sure that everybody understands that this stuff ties to this stuff, and this stuff ties to the business, and if all of this doesn't work right, then we don't get the results that we need....and if people aren't able to do this, you have to teach them how to do this" [M10, p. 28].

Three additional related but distinct themes within this cluster about roles related to managers' perceptions about role distinction, and specifically their beliefs about management and coaching, which most managers used synonymously with facilitating learning. To illustrate the theme of role distinction, one manager, M7, acknowledged the distinction between manager and coach as, "I think the thing is, that the word coach brings a different sense to that word. OK, when somebody says you're the manager, it's like you're in charge of it, OK, whereas if you are a coach, you are there more to help people succeed" [p. 29]. They further articulated this distinction by sharing their views about what management means to them, and what coaching means to them, which represent the two other themes within this beliefs cluster. Managing for these managers was perceived to be telling, judging and controlling, and coaching was perceived to be a way of empowering learners, helping learners to understand, and removing obstacles that inhibited their abilities to excel. These two excerpts illustrate these themes respectively. Manager, M9, acknowledged, "the word manager to me, the picture that comes to my mind is, manager is when you tell somebody to go from A to Z and you tell them exactly how to get there" [p. 25], and in contrast, another manager, M6, said, "a coach is just the opposite of that {manager}. The coach is one {who} empowers {team members}, gives them responsibility and expects them to make decisions, expects them to grow and develop and get better at what they do, and have more of an impact. We're hiring your mind, not your body. I don't care if you have {certain physical talents}, it's up here {pointing to head} that is really gonna make us better than what we are today. It's more interaction, it's more give, take. It's more using each others' skills and leveraging each others' skills" [p. 23].

These findings about roles are significant because they contradict some of the existing management literature. Although Honey (1995) has acknowledged that developing people has long been held to be one of the most important responsibilities of any manager, he suggests that few managers regard themselves as developers because they view it as a distraction from their "proper" work, they are unsure how to go about it, or because they think that the training and HRD department are responsible. In contrast, based upon the findings from this study, the collective belief among all of the managers in this study was that facilitating learning was their current role. This belief was manifested in the enactment of thirteen sets of behaviors that formed the role dimensions associated with facilitating learning in this study. This finding is also significant because earlier studies in management have suggested that behaviors associated with personnel and human resource management and development have tended to be prevalent when managers representing these functional areas have comprised the samples. Important to note is that the twelve managers participating in this study were mid and senior level managers representing various functional specializations, including manufacturing, finance and accounting, management information systems, customer service and facilities management. This also suggests that the nature of the behaviors that these managers enacted where not influenced by functional or hierarchical level which also contradicts some earlier research studies. Lastly, this study has depicted that being a facilitator of learning, or coach, and a manager are considered to be two different and distinct roles by managers in this study. Management research has often characterized the role of manager as being comprised of many specific behaviors, such as coaching, training, and mentoring (Yukl, 1981, 1989a, 1989b, 1994; Yukl & Van Fleet, n.d.). This study suggests that being a facilitator of learning is a role, and has delineated the specific behaviors which accompany this role.

Figure 1 depicts the cluster of beliefs about roles on a continuum representing a transition to becoming a learning organization. Managers in this study viewed the concept of being a manager and the concept of being a facilitator of learning, or a coach, as being dichotomous roles. However, many of these managers recognized that there were certain circumstances in which they had to flex between these roles, or perform a role switching function. This progression from recognizing that there are role distinctions between being a manager and being a coach appears to be an initial step in the movement of managers' mental models toward the concept of the learning organization. The next movement along this continuum appears to be role transition in which the managers experience role switching, but become increasingly more comfortable in coaching roles. At this point, managers express their preferences at being in a coaching role as opposed to a manager role. The final movement along this continuum appears to be role adoption in which the manager identifies with the role of coach. One manager shared an incident which captures the essence of this continuum. Manager, M3, related a situation in which a team did not take the initiative on a project. When he met with the team, he said, "Basically {I} had to say as a manager, by this date I would like to see a plan and what are we going to do" [p. 10]. When he later got feedback that the team felt badly and somewhat beaten up, M3 consciously stepped out of the role of manager and into the role of facilitator of learning. He and his team had additional meetings, "where it was definitely more teaching than judging and managing ....because I toned it down, and I focused more on the teaching rather than the judging" [p. 11].



Role Distinction →Role Transition →Role Adoption →Role Identity

Figure 1. Transitioning to the learning organization

It is important to note that this manager to coach continuum may also be reflective of the overall transition that these organizations are making in becoming learning organizations. The four organizations in this study have all been actively experimenting with learning organization initiatives, however, some began implementing these initiatives earlier than others.

The remaining five clusters of managers' beliefs are depicted in Table 3. Although space does not permit a detailed discussion about each of the five remaining clusters of beliefs and their respective themes, some of the findings will be shared for each cluster.

Table 3. Five remaining belief clusters

Beliefs About My Personal Capabilities
I Care Enough to Help Them
What I Brought to the Learning Episode- Skills and Abilities
Applying My Experiences

Beliefs About Learners
People Are Very Capable
The Exception: I'm Not Sure if They Can Do This
They Must Be Willing to Learn -- Learning is Not One Way
Learners Need a Solid Foundation
Learners Need to Understand the Whys

Beliefs About Learning
Learning is Important
Learning is Ongoing
We Learn from Each Other

Beliefs About General Capabilities
The Capabilities You Need to be Facilitator of Learning
You Need to Know Them to Help Them
Facilitating Learning Involves Trust

Beliefs About the Learning Process
Feedback is Important
Integrate Learning with Work
You Need to Make Them Learn for Themselves

Beliefs About My Personal Capabilities. This cluster was composed of three themes. In reflecting about the incidents they reported when they were engaged as facilitators of learning, many managers indicated that they felt they possessed effective communication skills, conceptual skills, and the ability to provide different perspectives to their employees. These managers also alluded to the importance of caring about their employees. Many managers felt that a sincere, honest and caring attitude was innate, however, they regarded it as critical to facilitating learning. The other theme in this cluster related to the managers' abilities to apply their own personal and professional experiences to the learning episodes. This ability to apply their own experiences to learning episodes was considered a crucial capability to facilitate learning.

Beliefs About General Capabilities. The beliefs relating to the more general capabilities were reflective of managers' perceptions of what skills and capabilities facilitators of learning needed to have to facilitate learning. Communication skills, conceptual skills and the ability to offer different perspectives were considered necessary. Additionally, managers believed that it was extremely necessary to know their employees very well, both personally and professionally, to be able to more effectively facilitate their learning. Also significant was the establishment of the trust factor, which they also perceived to be an important capability. The establishment of open, trusting relationships has also been cited in the coaching literature. The importance of knowing your employees well enough to help them has also been a theme which has emerged in Schelling's (1991) research on successful sales managers.

Beliefs About Learners. This cluster included five themes. These themes related to managers' beliefs that their employees were extremely capable of learning, making decisions and exceeding expectations. Research conducted by Schneider, Klemp and Kastendiek (in Watkins, 1983) about the skills, values and attitudes that underlie effective teaching reported findings related to this theme. The overall expression of positive expectations was a powerful theme that emerged in their findings regarding effective teachers. The single most dominant theme with average faculty members was the expression of negative expectations. This high level of regard for students' as learners in this study seems to parallel the findings in the current study about the managers' high level regard for their employees as learners. There was one conflicting theme in which two managers indicated their overall uncertainty about the capabilities of their employees, however, the researcher suspects that mitigating circumstances affected their perceptions. In each case, the managers had inherited perceived problem employees and had only been exposed to the negative comments that had been made about each of their respective situations. In each case, both managers were successful in rehabilitating these problem employees into top performers. The next theme relating to employees' willingness to learn is supported as a component of coaching in Seifert's (1994) review of the coaching literature. Evered and Selman (1989) acknowledge that one of the basic principles of effective coaching is "that no one can be coached in the absence of a demand for it" (p. 21). The two remaining themes in this cluster of beliefs relate to managers' overall perceptions that learners need a solid foundation of information, both in formal education, and on-the-job knowledge, and need to understand the 'why's of their work.

Beliefs About the Learning Process. This cluster included managers' beliefs about the importance of feedback to coaching and facilitating learning, that learning should be integrated within the context of the work environment, and that learners had to assume some of the responsibility for their own learning and be held accountable. Feedback as a component of effective coaching has been widely reported in the coaching literature. The integration of learning with work is incorporated into many definitions that scholars have used to describe learning organizations, and represents a way of building continuous learning opportunities by integrating informal learning and formal learning. Generally, most learning that occurs in the workplace is informal and incidental learning.

Beliefs About Learning. This final cluster underscored managers' beliefs about the importance of learning, the continuous, iterative and on-going nature of learning, and the notion that learning is shared. As one manager, M10, stated, "....to me, the single biggest thing you could do to improve management is to teach managers how to teach people, which no one teaches in management school or in any business anywhere. No one teaches you how to teach people" [p. 6].

How This Research Contributes to New Knowledge in HRD

This study is particularly relevant to the management, adult education and human resource development fields for a number of reasons. As managerial roles are redefined to include teaching, coaching, education and development in organizations seeking to become more learning-oriented, trainers and human resource development practitioners traditionally responsible for such training, coaching and development functions will no longer be considered the sole providers of these services, but part of a much broader educational system within the organization. As a result, it is possible that an increasing number of the adult educators in the workplace will be managers and leaders. Although there is a growing body of literature on coaching, it tends to be atheoretical (Popper & Lipshitz, 1992), and only a few empirical studies have been conducted which examine what good coaches do, and the relationship between preferred models of coaching and improved performance (Marsh, 1992). Additionally, most literature on managerial behaviors has not captured or integrated managers' reasoning into the behavioral equation (Gibbs, 1994; Marshall & Stewart, 1981; Stewart, 1989). Stewart (1989) has indicated that studying how individual managers think about their work and their jobs is "the most open-ended, and potentially the most difficult and the most exciting of the possibilities outlined so far" (p. 8).

The current research empirically examined the beliefs of managers, not traditionally charged with training and human resource development tasks, which guided their actions in facilitating learning of their employees in learning organizations. The models that managers have about their jobs have widespread implications for management researchers, management teachers, and management development (Marshall & Stewart, 1981), and this study provides a foundation upon which other researchers can build. Specifically, these findings may provide managers, trainers, and human resource development professionals with an understanding of the mental models of exemplary facilitators of learning that guide their reasoning and action, so that interventions can be developed to assist in this role transition process.

References

Antonioni, D. (1994). Managerial roles for effective team leadership. Supervisory Management, 39(5), 3.

Campbell, J. P., Dunnette, M. D., Lawler, E. E., III, & Weick, K. E., Jr. (1970). Managerial behavior, performance, and effectiveness. New York, NY: McGraw-Hill Book Company.

Clawson, V. (1992). The role of the facilitator in computer supported environments. Unpublished doctoral dissertation, Walden University.

Conger, J. A. (1993). Training leaders for the twenty-first century. Human Resource Development Quarterly, 3(3), 203-218.

Day, G. S. (1994). The capabilities of market-driven organizations. Journal of Marketing, 58(4), 37-52.

de Geus, A. P. (1988). Planning as learning. Harvard Business Review, (March-April), 70-74.

de Geus, A. P. (1997). The living company. Harvard Business Review, 75(2), 51-59.

Evered, R. D., & Selman, J. C. (1989). Coaching and the art of management. Organizational Dynamics, 18(Autumn), 16-32.

Flanagan, J. C. (1954). The critical incident technique. Psychological Bulletin, 51(4), 327-358.

French, R., & Bazalgette, J. (1996). From 'learning organization' to 'teaching-learning organization'? Management Learning, 27(1), 113-128.

Frohman, A. L. (1978). The performance of innovation: Managerial roles. California Management Review, 20(3), 5-12.

Gibbs, B. (1994). The effects of environment and technology on managerial roles. Journal of Management, 20(3), 581-604.

Graham, S., Wedman, J. F., & Garvin-Kester, B. (1993). Manager coaching skills: Development and application. Performance Improvement Quarterly, 6(1), 2-13.

Graham, S., Wedman, J. F., & Garvin-Kester, B. (194). Manager coaching skills: What makes a good coach? Performance Improvement Quarterly, 7(2), 81-94.

Guba, E. G., & Lincoln, Y. S. (1981). Effective evaluation. San Francisco: Jossey-Bass.

Honey, P. (1995). Everyday experiences are opportunities for learning. People Management, 1(18), 55.

Kanter, R. M. (1989). The new managerial work. Harvard Business Review, (November-December), 85-92.

Marsh, L. (1992). Good manager: Good coach? What is needed for effective coaching? Industrial & Commercial Training, 42(9), 3-8.

Marshall, J., & Stewart, R. (1981). Managers' job perceptions: Part I: Their overall frameworks and working strategies. Journal of Management Studies, 18(2), 177-189.

Marshall, J., & Stewart, R. (1981). Managers' job perceptions: Part II: Opportunities for, and attitudes to, choice. Journal of Management Studies, 18(3), 263-275.

Morse, J. J., & Wagner, F. R. (1978). Measuring the process of managerial effectiveness. Academy of Management Journal, 21(1), 23-35.

Nonaka, I. (1991, November/December). The knowledge-creating company. Harvard Business Review, 96-104.

Orth, C. D., Wilkinson, H. E., & Benfari, R. C. (1987). The manager's role as coach and mentor. Organizational Dynamics, 56-74.

Popper, M., & Lipshitz, R. (1992). Coaching on leadership. Leadership & Organization Development Journal, 13(7), 15-18.

Rosow, J. M., Zager, R. (1989). New roles for managers: Part III: The manager as trainer, coach and leader. A Work in America Institute National Policy Study, Work in America Institute, Scarsdale, New York, 1-35.

Schelling, C. (1991). Measuring the impact of training. Cincinnati, OH: AT & T Research Report.

Schneider, C., Klemp, G. O., Jr., & Kastendiek, S. (1983). The balancing act: Competencies of effective teachers and mentors. In K. Watkins (Ed.), Innovation Abstracts, Vol. 5, No. 4, Austin, TX: National Institute for Staff and Organizational Development.

Seifert, L. L. (1994). Perceptions of managerial coaching within selected workplaces. Unpublished doctoral dissertation, University of Arkansas.

Senge, P. M. (1990a). The fifth discipline. New York, NY: Doubleday.

Senge, P. M. (1990b). The leader's new work: Building learning organizations. Sloan Management Review, 32(1), 7-23.

Senge, P. M. (1993). Transforming the practice of management. Human Resource Development Quarterly, 4(1), 5-32.

Slater, S. F., & Narver, J. C. (1994). Market oriented isn't enough: Build a learning organization. Marketing Science Institute (Report Number 94-103), 1-30.

Slater, S. F., & Narver, J. C. (1995). Market orientation and the learning organization. Journal of Marketing, 59(July), 63-74.

Stewart, R. (1989). Studies of managerial jobs and behaviour: The ways forward. Journal of Management Studies, (1), 1-10.

Ulrich, D., Von Glinow, M. A., & Jick, T. (1993). High-impact learning: Building and diffusing learning capability. Organizational Dynamics (Autumn), 52-66.

Watkins, K. E., & Marsick, V. J. (1993). Sculpting the learning organization: Lessons in the art and science of systemic change. San Francisco, CA: Jossey-Bass.

Watkins, K. E., & Marsick, V. J. (1996a). Adult educators and the challenge of the learning organization. Adult Learning, 7(4), 18-20.

Watkins, K. E., & Marsick, V. J. (Eds.) (1996b). In action: Creating the learning organization. Virginia: American Society for Training and Development.

Weaver, R. G., & Farrell, J. D. (1997). Managers as facilitators. San Francisco, CA: Berrett-Koehler Publishers, Inc.

Weber, R. P. (1990). Basic content analysis (2nd ed.). Newbury Park, CA: Sage Publications, Inc.

Wisdom, B. L., & Denton, D. K. (1991). Manager as teacher. Training and Development, 45(12), 54-58.

Yukl, G. A. (1981). Leadership in organizations. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Yukl, G. A. (1989a). Leadership in organizations (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall, Inc.

Yukl, G. (1989b). Managerial leadership: A review of theory and research. Journal of Management, 15(2), 251-289.

Yukl, G. (1994). Leadership in organizations (3rd ed.). Englewood Cliffs, NJ: Prentice Hall.

Yukl, G., & Van Fleet, D. D. (n.d.). Theory and research on leadership in organizations, in (unknown).

The Learning Organization as a Performance Improvement Strategy

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The learning organization has received increased attention in the literature as a strategy to increase learning at the individual, team, and organization levels. In a similar manner, the innovation literature has seen renewed and continued interest and growth. A review of both literatures suggests that similar strategies are discussed and recommended for use by organizations seeking improved effectiveness and increased competitive advantage. This paper examines the parallels and concludes with a set of research propositions hypothesizing the mechanism by which the learning organization improves performance.

The learning organization has been a focus of attention in the organizational literature in recent years. Interest in this organizational development (OD) intervention has been spurred by the constantly changing work and business environments, which has been prompted by technological advances, increased levels of competition, and globalization of industries. Senge and other researchers have described the characteristics of the learning organization and made suggestions for organizational implementation (Kline & Saunders, 1993; Marquardt, 1996; Pedler et al., 1991; Senge, 1990; Watkins & Marsick, 1993). Books have been written outlining successful implementation and turn-around stories in leading organizations such as Honda, Federal Express, Xerox, and Corning (Garvin, 1993; Marquardt, 1995). The claim has been made that, by adopting some or all of the prescribed features of the learning organization, an organization's performance should be improved (Kline & Saunders, 1993; Kuchinke, 1995; Senge, 1992; Slater & Narver, 1995).

Much of the learning organization literature is conceptual and descriptive. While there are numerous descriptive accounts and suggestions about why the process works, there are few concrete descriptions about how it works to achieve performance improvement. Definitions of the learning organization speak in terms of achievement, and Kline and Saunders (1993) clearly state that "what's at stake is continuous improvement" to achieve greater effectiveness (p.33). Learning organizations perceive learning as the means to long-term performance improvement (Guns, 1996). However, there is little data supporting the claim that performance improvement is directly related to adoption of the learning organization's suggested behaviors or policies. Research is sorely needed to fill this void. Sound research and data supporting the claims of performance improvement directly related to the learning organization implementation would provide a level of validity which currently is not strongly apparent (Jacobs, 1995).

One reason that research is missing may be the lack of a specific researchable theoretical framework with which to design empirical studies. A review of the learning organization literature suggests that many of the characteristics and recommended organizational procedures are similar to those found in the innovation literature (Damanpour, 1991; Kuchinke, 1995; Nonaka & Takeuchi, 1995; Strata, 1989; Tjosvold & McNeely, 1988). Both literatures make claims to organizational performance improvement. It is proposed that innovation may be the link which enables the learning organization to impact organizational performance.

The purpose of this paper is to propose the process through which the learning organization brings about organization performance improvement. The goal of proposing this model and propositions is to spur research into the organizational learning-performance relationship. More specifically, this paper will:

1.) Explore the parallels between the learning organization and innovation research, and
2.) Propose a model and a series of researchable propositions about the relationship between the learning organization, innovation, and performance improvement.

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Learning Organization

The dimensions which are commonly described in the literature as being associated with a learning organization are not new concepts but their coordination into a system focused on organizational learning is. However, there is no single definition of what the learning organization is. Senge defines a learning organization as "a place where people are continually discovering how they create their reality (Senge, 1990, p.13). Watkins and Marsick (1993) describe a learning organization in terms of people learning and working together to achieve their goals. A comprehensive definition of a learning organization is offered by Marquardt (1996. p.19): "… an organization which learns powerfully and collectively and is continually transforming itself to better collect, manage, and use knowledge for corporate success."

There appears to be some common recognition and agreement about the core characteristics of a learning organization. Researchers suggest that: individuals and teams work toward the attainment of linked and shared goals, communication is open, information is available and shared, systems thinking is the norm, leaders are champions of learning, management practices support learning, learning is encouraged and rewarded, and new ideas are welcome (Marquardt, 1996; Senge, 1990; Watkins & Marsick, 1993;). The learning outcomes found in a learning organization are expected to include experiential learning, team learning, second-loop learning, and shared meaning (Argyris, 1977; Argyris & Schon, 1978; Dodgson, 1993; Senge, 1990). As a result of this learning, organizations are believed to be capable of new ways of thinking. However, learning is viewed as a means to an end by Kuchinke (1995), who says that an "orientation toward performance improvement gives the learning organization focus and legitimacy" (p. 309). Organizational learning, to be of value, must be managed for performance at the individual, group, and organizational levels (Kuchinke, 1995).

Holton (in press) provides a useful taxonomy of "performance" and "performance drivers" that accommodates the gap between those focused first on the organization and then learning, versus those focused first on the learning and then the organization. Performance is the actual outcomes produced by the organization (e.g. goods and services). Drivers are elements of performance that are expected to sustain or increase system, sub-system, process, or individual ability and capacity to be more effective or efficient in the future. Thus, they are leading indicators of future outcomes and tend to be unique for particular business units. Together with outcome measures, they describe the hypothesized cause and effect relationships in the organization's strategy (Kaplan & Norton, 1996). HRD professionals must pay attention to both performance and performance drivers. Organization performance, such as high quality services delivered to external customers, can be logically connected to performance drivers, such as learning and innovation.

Using this conceptualization, the learning organization would be classified as a strategy focusing on performance drivers. More specifically, it enhances learning, which in turn is believed to enhance performance. The problem is that the gap between learning and performance is large, and the relationship is difficult to prove.

Innovation

Just as the learning organization has been described as an organizational response to the dramatically changing work environment, so has innovation been described as finding its genesis in "shocks that may be either internal or external to an organization (Van de Ven & Rogers, 1988, p.644). Innovation is conceived as an organizational response to environmental change by Damanpour and Evan (1984) and by Brown and Duguid (1991). Put simply, innovation is a new idea (Galbraith, 1982; Van de Ven, 1986) which may be created by or adopted by the organization. The expected result is improvement in the achievement of goals and organizational performance (Damanpour, 1991; Damanpour & Evan, 1984).

Innovation involves the generation, development, and implementation of ideas or behaviors (Damanpour, 1991) and is defined as:

> *"...the adoption of an internally generated or purchased device, system, policy, program, process, product, or service that is new to the adopting organization" (p.556).*

The key to innovation is the creative process which is grounded in learning and knowledge creation.

Table 1-Characteristics of Learning and Innovating Organizations

Learning Organization	Innovating Organization	
Environment/Customers	External Environment	Meyers & Goes, 1988
Leadership	Leadership	Meyers & Goes, 1988 Galbraith, 1982
Alliances	Advocacy	Meyers & Goes, 1988
Champion	Champion	Daft & Becker, 1978 Leonard-Barton, 1988
Structure: Boundaryless	Structural Complexity	Rogers, 1983 Damanpour, 1991 Leonard-Barton, 1988 Galbraith, 1982
Customers, Suppliers, Vendors	Market Strategy	Meyer, 1982
Resource Commitment	Resource Allocation	Meyers & Goes, 1988 Damanpour, 1991 Amabile, 1988
	Attitudes Toward	Ettlie & O'Keefe, 1982 Damanpour, 1991
Communication Sharing	Communication	Tjosvold & McNeely, 1988 Brown & Duguid, 1991 Damanpour, 1991 Galbraith, 1982 Fidler & Johnson, 1984
Vision/Goals/Systems	Cooperative Goals	Tjosvold & McNeely, 1988
Double-loop learning/ Mental Models	New Interpretations of Information	Brown & Duguid, 1991
Communities of Practice	Communities of Practice	Brown & Duguid, 1991
Culture	Culture, Norms, Values	Glynn, 1996
Learning: Indiv., Team, & Organizational	Learning Capabilities	Glynn, 1996
Experiential Learning	Problem novelty/challenge	Glynn,1996 Amabile, 1988
Learning Systems	Technology	Glynn,1996
Trust and Autonomy	Operational Autonomy	Amabile, 1988
Empowerment		
Management Practices	Management Practices	Amabile, 1988
Incentives/Encouragement	Encouragement	Amabile, 1988
Learning Climate	Climate	Amabile, 1988
Recognition/Reward	Recognition /Reward	Amabile, 1988 Galbraith, 1982
Table developed using Argyris & Schon (1978); Ashkenas, et al. (1995); Marquardt, (1996); Senge (1994, 1990); Watkins & Marsick (1993)		

Nonaka and Takeuchi (1995) suggest that during the knowledge creation process, information is taken into the organization and shared, stored, and used by the organization in developing new technologies and products. They suggest that a "conversion of some sort takes place" (p.6). They describe the process as one of knowledge creation, continuous innovation, and competitive advantage leading to organizational success. This conversion may be the same process described in the learning organization literature.

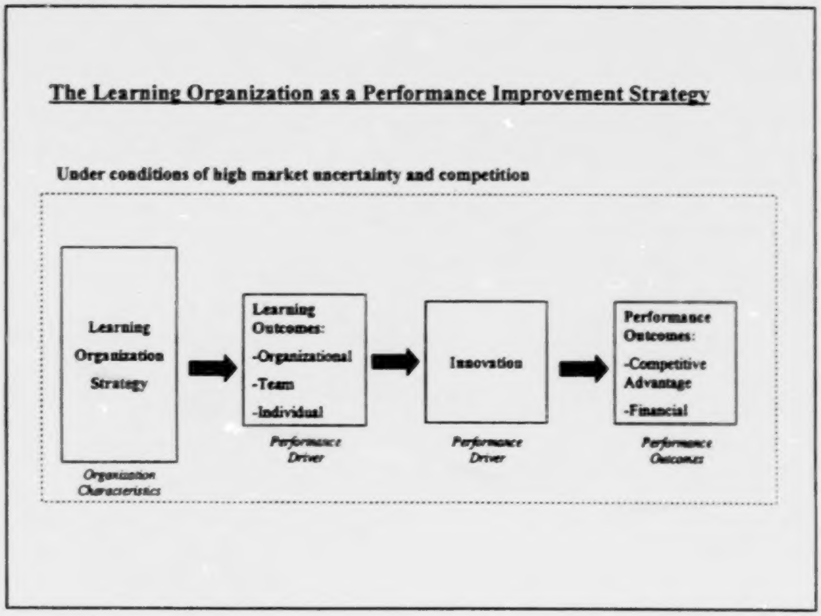
The learning organization and the innovating organization are both dependent on the acquisition of information, the interpretation of information, the creation of meaning, and the creation of organizational knowledge. The stated end goal of both the learning system and the innovating system is improved organizational performance. The similarities between the two literatures are striking (see Table 1): the linking pin in both is knowledge; the goal in both is performance improvement.

A comparison of both literatures suggests that the organizational strategies engaged to support the learning and innovating endeavors are similar and suggest parallel strategies. Innovation appears to be affected by culture, climate, leadership, management practices, dynamics of information processing, organizational structure, organizational systems, and the environment. Table 1 summarizes the organizational strategies, structures, and practices which are found in both the learning organization literature and the innovation literature.

The existence of these parallel sets of variables suggests that a relationship may exist between the learning organization and innovation. The relationship may be that the learning organization enables the conversion of information to a knowledge level, thereby enhancing innovation which promotes organizational performance improvement. If this relationship is true, then a large base of innovation research has been overlooked that would help provide additional clarity and precision to understanding how the learning organization improves performance.

Based on the review of the learning organization and innovation literatures, and on the parallel sets of variables and theorized relationships to performance improvement, the following model (see Figure 1) is proposed. This model hypothesizes that learning organization strategies increase learning and innovation (performance drivers) which improve performance outcomes.

Figure 1


The Learning Organization as a Performance Improvement Strategy
Under conditions of high market uncertainty and competition
Learning Organization Strategy
Learning Outcomes:
-Organizational
-Team
-Individual
Innovation
Performance Outcomes:
-Competitive Advantage
-Financial
Organization Characteristics
Performance Driver
Performance Driver
Performance Outcomes

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Research Propositions

This hypothesized model of the learning organization as a performance improvement strategy results in the following research propositions.

> *Proposition 1: Adoption and implementation by an organization of the characteristics described in the learning organization literature will result in improved learning at the individual, team, and organizational levels.*

The outcome goal of learning at all levels is well articulated in the literature (Marquardt, 1996; Senge, 1990; Watkins & Marsick, 1993). Strategies for achieving this stated goal have been proposed which include changes in organizational and team cultures, leadership and management practices, structure and systems, communication practices, and in organizational values, goals, and vision (Guns, 1996; Marquardt, 1996; Pedler et al., 1991; Senge, 1994).

> *Proposition 2: Learning, in particular improved learning at the team and organizational levels, leads to increased organization innovation.*

While innovation is sometimes thought to be the creation of a single individual, it is more often the result of collective efforts. Organizations are thought to acquire knowledge and capabilities which cannot be found in any individual member (Garud, et al., 1997). It is this collective aspect of learning and the greater knowledge created through the communal process that is the goal of communities-of-practice (Brown & Duguid, 1991).

> *Proposition 3: The adoption of learning organization strategies is appropriate for organizations in markets where innovation is a key performance driver.*

The performance link to organizational learning has been recognized by other theorists as well. Strata (1989) described learning as a fundamental concept which is related to organizational change and improvement. Dodgson (1993) reports that the need for organizations to learn is often related to change. And, the expressed requirements during these periods are both adaptation and efficiency. He goes on to state that learning is regarded as necessary in order for organizations to improve their competitiveness, productivity, and innovativeness. Strata (1989) believes that learning is the principal process in management innovation.

The key problem for organizations is recognizing when the environment is appropriate for a learning strategy. As Bartlett and Ghoshal (1997) point out, organizations in rapidly changing markets find traditional strategic planning approaches inadequate because they can not forecast the future accurately. Instead, they have to focus on being more responsive to change, and therefore increase learning and innovation. It would be inappropriate to argue that all organizations should adopt a learning strategy, or the same degree and scope of learning strategy. The learning strategy, if adopted, must match the environmental conditions, only some of which are expected to lead to improved performance.

> *Proposition 4: Under appropriate environmental conditions, innovation sustains or increases system, sub-system, process, or individual ability and capacity to be more effective or efficient in the future.*

In support of these views, Slater and Narver (1995) suggest that "behavior change is the link between organizational learning and its ultimate objective, performance improvement" (p.66). Innovation is believed to lead to improved goal attainment and organizational performance (Damanpour, 1991; Damanpour & Evan, 1984).

> *Proposition 5: Innovation in expected to result in improved performance outcomes, leading to competitive advantage for the organization.*

Innovation is defined by Damanpour (1991) includes devices, systems, policies, programs, processes, products, and services new to the organization. The successful internal adoption of these as performance drivers acts an indicator of goals related to future performance outcomes (Holton, in press). Organizational competitive advantage is believed to have four generic sources (Obloj et al., 1995). These are described as: favorable cost advantage, product and service differentiation, product line scope either through broader range of products and services, or through product focus achieving quality status, and time to market .

> *Proposition 6: The competitive advantage resulting from innovation-induced performance outcomes will result in improved organizational financial outcome measures.*

Among the financially beneficial outcomes related to competitive advantage are: market share, customer loyalty, high status of product brand, and high profits (Obloj et al., 1995). Dornblaser, Lin and Van de Ven (1989) list the outcome criteria used by innovation managers as market success, ROI, contribution to organizational goals, and impact on organizational survival and growth.

The economic theory of innovations suggests that the effect of innovation is the same as explained by the classic economic model: it either lowers the cost curve or increases the output curve (Rosegger, 1996). However, intensive studies of innovations show that traditional profit maximizing strategies from the classic economic model are not effective in light of the extreme uncertainty inherent in innovation (Freeman & Soete, 1997). Factors identified by economists for economically successful innovations include many identified by the learning organization: strong internal communication, inter-functional coordination, open-minded management, responsiveness to change, acceptance of risk, entrepreneurial culture, customer orientation, commitment to developing human capital (Freeman & Soete, 1997, p. 223).

> *Proposition 7: In markets where innovation is necessary for survival, four states of potential organizational viability exist. These are:*
>
> *7a. A state defined by low learning/innovation - low organizational effectiveness results in stagnancy, marked by reliance on current products and processes, and no increase in market share and related financial markers.*
> *7b. A state defined by high learning/innovation - low organizational effectiveness results in short term viability, marked by new products, new processes but no increase in market share nor related financial markers.*
> *7c. A state defined by low learning/innovation - high organizational effectiveness results in short term viability, marked by a threatened state for the organization due to the pace of change of innovative competitors.*
> *7d. A state defined by high learning/innovation - high organizational effectiveness results in continued organizational viability, marked by continued learning, innovation, and improved performance, and supported by the organization's competitive position.*

Conclusion

These propositions are entirely untested and should not be interpreted as statements of fact. Nonetheless, there is compelling evidence that if the learning organization does in fact improve organizational performance, innovation may be the missing link. It is important that learning organization theory and research be extended to more specifically explicate the mechanisms by which organizational learning improves performance. This paper provides an initial set of testable propositions in the hopes that a more precise specification of the learning organization as a performance improvement strategy will result.

References

Amabile, T. (1988). A model of creativity and innovation in organizations. Research in Organizational Behavior, 10, 123-167.

Argyris, C. (1977). Double-loop learning in organizations. Harvard Business Review, 55, 115-125.

Argyris, C. & Schon, D. (1978). Organizational Learning: A Theory of Action Perspective. Reading, MA: Addison-Wesley.

Ashkenas, R., Ulrich, D., Jick, T. & Kerri, S. (1995). The Boundaryless Organization: Breaking The Chains of Organizational Structure. San Francisco: Josses-Bass.

Bartlett, C. A. & Ghoshal, S. (1997). Beyond strategic planning to organization learning: Lifeblood of the individualized corporation. Strategy and Leadership, 26, 34-39.

Brown, J. & Duguid, P. (1991). Organizational learning and communities-of-practice: toward a unified view of working, learning, and innovation. Organization Science, 2(1), 40-57.

Daft, R. & Huber, G. (1987). How organizations learn: a communication framework. Research in the Sociology of Organizations, 5, 1-36.

Daft, R. & Becker, S. (1978). The Innovative Organization. NY: Elsevier.

Damanpour, F. (1991). Organizational innovation: a meta-analysis of effects and determinants and moderators. Academy of Management Journal, 34(3(, 555-590.

Damanpour, F. & Evan, W. (1984). Organizational innovation and performance: the problem of organizational lag. Administrative Science Quarterly, 29, 392-409.

Dodgson, M. (1993). Organizational learning; a review of some literatures. Organization Studies, 14(3), 375-394.

Dornblaster, B., Lin, T. and Van de Ven, A. (1989). Innovation outcomes, learning, and action loops. InVan de Ven, Angle, and Poole (Eds.), Research on the Management of Innovation. NY: Harper & Row.

Ettlie, J. & O'Keefe, R. (1982). Innovative attitudes, values, and intentions in organizations. Journal of Management Studies, 19(2), 163-182.

Fidler, L. & Johnson J.D. (1984). Communication and innovation implementation. Academy of Management Review, 9(4), 704-711.

Freeman, C. & Soete, L. (1997). The economics of industrial innovation-3rd edition. Cambridge, MA: MIT Press.

Galbraith, J. (1982). Designing the innovating organization. Organizational Dynamics, 10(3), 5-25.

Garud, R., Nayyar, P. and Shapira, P. (1997). Technological Innovation: Oversights and Foresights. NY: Cambridge University Press.

Garvin, D. (1993). Building a learning organization. Harvard Business Review, 71, 78-91.

Glynn, M. (1996). innovative genius: a framework for relating individual and organizational intelligences to innovation. Academy of Management Review, 21(4), 1081-1111.

Guns, B. (1996). The Learning Organization: Gain and Sustain the Competitive Edge. San Diego: Pfeiffer.

Holton, Elwood F. III (in press) What is performance? Bounding the Domain. In R. Torraco (Ed.) Defining the agenda for performance improvement research. Washington, DC: International Society for Performance Improvement.

Jacobs, R. (1995). Impressions about the learning organization: looking to see what is behind the curtain. Human Resource Development Quarterly, 6 (2), 119-122.

Kaplan, R. S. & Norton, D. P. (1996). The balanced scorecard. Boston: Harvard Business School Press.

Kline, P. & Saunders, B. (1993). Ten Steps To A Learning Organization. Arlington, VA: Great Ocean Publishers.

Kuchinke, K. P. (1995). Managing learning for performance. Human Resource Development Quarterly, 6(3), 307-316.

Leonard-Barton, D. (1988). implementation characteristics of organizational innovations. Communication Research, 15(5), 603-631.

Marquardt, M. (1996) Building The Learning Organization. NY: McGraw-Hill.

Marquardt, M. (1995). Building a global learning organization. Industry & Higher Education, August, 217-226.

Meyer, A. (1982). Adapting to environmental jolts. Administrative Science Quarterly, 27, 515-537.

Meyer, A. & Goes, J. (1988). Organizational assimilation of innovations: a multilevel contextual analysis. Academy of Management Journal, 31(4), 897-923.

Nonaka, I. & Takeuchi, H. (1995). The Knowledge-Creating Company. NY: Oxford University Press.

Obloj, K., Cushman, D. and Kozminski, A. (1995). Winning: continuous Improvement Theory in High-Performance Organizations. Albany, NY: State University of New York Press.

Pedler, M., Bourgoyne, J. & Boydell, T. (1991). The Learning Company: A Strategy for Sustainable Development. London: McGraw-Hill (Europe).

Rogers, E. (1983). Diffusion of innovations. NY: Free Press.

Rosegger, G. (1996). The economics of production and innovation: An industrial perspective-3rd edition. Oxford: Butterworth-Heinemann Press.

Senge, P. (1994). The Fifth Discipline Fieldbook. NY: Doubleday.

Senge, P. (1992). Building the Learning Organization. Journal for Quality and Participation, March, 30-38.

Senge, P. (1990). The Fifth Discipline: The Art And Practice Of The Learning Organization. New York: Doubleday.

Slater, S. & Narver, J. (1995). Market orientation and the learning organization. Journal of Marketing, 59 (July), 63-74.

Strata. R. (1989). Organizational learning- the key to management innovation. Sloan Management Review, Spring, 63-74.

Tjosvold, D. & McNeely, L. (1988). Innovation through communication in an educational bureaucracy. Communications Research, 15(5), 568-581.

Van de Ven, A & Rogers, E. (1988). Innovations and organizations: critical perspectives. Communication Research, 15(5), 632-651.

Van de Ven, A. (1986). Central problems in the management of innovation. Management Science, 32, 590-607.

Watkins, K. & Marsick, V. (1993). Sculpting The Learning Organization: Lessons in the Art and Science of Systemic Change. San Francisco: Jossey-Bass.

Examining Construct Validity of Dimensions of the Learning Organization Questionnaire

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The article reports a study examining the construct validate of a newly developed instrument measuring dimensions of the learning organization. Supporting validity evidence for the instrument was obtained from several sources including: best model-data fit among alternative measurement models, nomological network among dimensions of the learning organization and organizational performance outcomes. Moderate to high reliability estimates were obtained for the seven proposed dimensions of the construct. Consequently, the instrument, Dimensions of the Learning Organization Questionnaire (DLOQ), was recommended for use in organizational studies.

The concept of learning organization has received an increasing attention in the field of human resource development, yet little is known about how to measure it. From a theoretical perspective and for research purposes, researchers need to know the dimensionality of this concept and its relationships with other organizational variables. Watkins and Marsick (1993, 1996) identified seven dimensions of learning organization: create continuous learning opportunities (referred as *Continuous Learning*), promote dialogue and inquiry (*Dialogue and Inquiry*), promote collaboration and team learning (*Team Learning*), empower people toward a collective vision (*Empowerment*), establish systems to capture and share learning (*Embedded System*), connect the organization to its environment (*System Connection*), and provide strategic leadership for learning (*Provide Leadership*). Based on their proposed theoretical framework, an instrument entitled Dimensions of the Learning Organization (DLOQ) was developed to assess learning activities in the organization. Content validity and reliability evidences have been shown in previous studies (Watkins, Yang, Marsick, 1997).

This study was designed to investigate the construct validity of the DLOQ by examining the number of dimensions thought to explain the inter-relations among items included in the instrument, and by examining the relationship between learning behavior measured on the scale and organizational outcome variables.

Two questions were addressed to assess the construct validity of the DLOQ:

(1) To what extent do the proposed dimensions of the learning organization explain the covariation of learning behaviors in the responses to the items in the instrument?

(2) What is the relationship between learning behavior and organizational outcome variables as defined by financial and knowledge performance?

Methods

Copies of DLOQ version 3 were distributed to a non-random sample of respondents from multiple organizations. A total of 469 valid responses were collected between the spring of 1997 and summer of 1997 and served as the sample for the present study. A little more than half (55%) of the respondents worked in service sector, 40% of them worked in manufacturing, and only 5% of them worked in government or other public organizations. About one-third (34%)of the responses have reported to have annual revenue between $2-25 million, while 30% of them reported annual revenue between $25-99 million. The majority (46%) of the respondents reported that they spent 1 to 10 hours of their own time on work-related learning per month.

Several techniques were utilized to determine a final form of the instrument with adequate psychometric properties and with demonstrable construct validity. Construct validity refers to the

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extent to which a scale developer can assure exactly what the instrument is measuring (AERA/APA/NCME, 1985; Crocker & Algina, 1986). In this study, confirmatory factor analysis (CFA) was selected to assess the construct validity for the measure of dimensions of the learning organization. This factor analysis technique was the appropriate method as it examines if the proposed dimensions of the learning organization had some attributes that could provide organized interpretations of learning behaviors. It can be used to verify the adequacy of the item to factor associations and the number of dimensions underlying the construct (Bollen, 1989; Thompson & Daniel, 1996). Structural equation modeling (SEM) was used to assess the relations between dimensions of the learning organization, key demographic variables, and organizational performance measures. All analyses were performed with LISREL 8 based on the covariance matrices generated by PRELIS 2 (Jöreskog & Sörbom, 1993a, 1993b).

Testing Alternative Measurement Models The construct validity for the measures of the DLOQ were first examined by testing alternative measurement models, following Jöreskog's (1993) method of alternative models (AM). Three competing measurement models were formulated and tested. The first model was a null model where no common latent variable was assumed to exist among the observed variables represented by the instrument items. This is also called the baseline model because it is the simplest and most restrictive model which can be used to compare other less restrictive models. This model assumes that there is no common concept for us to investigate among various learning activities in the organization. The second model assumed one factor underlies the observed variables and that the covariations among the observed variables could be adequately explained by a single construct of the learning organization. In other words, this model assumed that the learning organization is an unidimensional concept. The third model consisted of seven latent variables representing seven proposed dimensions of the construct. The third model was of interest as we want to see if the proposed constructs explain the covariances among observed variables reasonably well and to see if this model showed a significantly improvement in the model-data fit over the null model and one-factor model.

Examining the Instrument Reliability There are a number of measurement models that have been proposed to estimate the reliability of a scale (Lord & Novick, 1968). One of the most common reliability estimates is Cronbach's coefficient alpha [Cronbach's α (1951)]. However, it has been suggested that Cronbach's coefficient alpha (α) represents the lower bound of the reliability coefficient, as it assumes that all individual items measure the true score of the latent variable equally well (Bollen, 1989; Crocker & Algina, 1986). The coefficient α represents a classic model of reliability estimation where an individual's true score is viewed as the average of an infinite number of responded scores of the same test. Therefore, a more realistic measurement model was required to estimate the reliability of the instrument.

Cronbach's α (1951) assumes a tau-equivalent model. The tau-equivalent model assumes that each item is an equally accurate indicator of the same true score, and that the separate item errors are uncorrelated and have different variance. However, the tau-equivalent model is quite restrictive and tends to be biased in estimating reliability because items in a scale do not all perform equally well in measuring the same true score. The tau-equivalent model cannot be used to estimate reliability for individual items when the equality of the items' association to the true score is not maintained (Bollen, 1989; Fleishman & Benson, 1987; Lord & Novick, 1968).

The congeneric model (Jöreskog, 1969) is less restrictive and assumes only that each item reflects the same true score, but to different degrees, and that item errors may differ or even be correlated. The congeneric model was deemed to be appropriate in estimating the reliability of the instrument for the current study. To assess the reliability with congeneric model, a confirmatory factor analysis needs to be performed and the reliability estimates can be obtained by calculating the proportion of item variance that can be accounted by the latent variable (Fleishman & Benson, 1987).

Assessing Nomological Validity Organizations use a variety of ways to learn, and their behaviors could be reported from as many perspectives as there are observers. These different learning dimensions collectively define the concept of the learning organization. The learning organization is a construct that researchers postulate to reflect interpretable learning behaviors in organizations. The empirical evidence of interrelations among constructs provides a means for establishing and validating theoretical frameworks in social science research. Social science is an enterprise of discovering laws underlying social phenomena, and is engaged in a back and forth process (empirical evidence vs. theorizing). The theoretical relations among the concepts of interest, or interlocking system of lawful relations, is referred to as a nomological network by Cronbach and Meehl (1955). The concept of nomological validity is a major contribution in psychometric literature, and it is a useful design in the practice of scale validation (Benson & Hagtvet, 1996).

Cronbach and Meehl (1955) maintained that "[a] rigorous (though perhaps probabilistic) chain of inference is required to establish a test [or a scale] as a measure of a construct. To validate a claim that a test measures a construct, a nomological net surrounding the concept must exist" (p. 291). In other words, "[a] necessary condition for a construct to be scientifically admissible is that it occur[s] on a nomological net, at least *some* [italic original] of whose laws involve observables" (p. 290). For the current study the nomological networks between dimensions of the learning organization and organizational outcome variables was examined. Two variables, financial performance and knowledge performance, were constructed in the DLOQ to establish a nomological net between learning behaviors and outcomes. According to Watkins and Marsick (1993, 1996), there are three levels of organizational learning. The first is individual level which is composed by two dimensions of organizational learning: *Continuous Learning* and *Dialogue and Inquiry*. The second is team or group level which is reflected by *Team Learning and Collaboration*. The third is the organizational level that has four dimensions of organizational learning: *Embedded System*, *System Connection*, *Empowerment* and *Provide Leadership*. It was reasoned that the organization needs to work with people at the individual and group level first. People also need to be empowered to take learning initiatives. It was also reasoned that the organizational level learning activity could serve as a refine function by filtering and incorporating individual and group learning into the organization's mission or ultimate performance outcome. Particularly, we theorized that three variables, *System Connection, Embedded System and Provide Leadership*, are the mediators between individual level learning activities and organizational outcomes. In Figure 1, a proposed model captures the hypotheses about the relationships among dimensions of the learning organization and outcome variables.

Following Benson and Hagtvet (1996), the method of structural equation modeling (SEM) was used to examine the relationships postulated in Figure 1. If the proposed model fits the data and the hypothesized relations among the constructs are found to be significant in the desirable directions, there are significant relations between the proposed seven dimensions of the learning organization and the two organizational outcome variables. It then can be concluded that learning behaviors measured on the instrument are significantly related to organizational outcomes, in a way implied by the theory. Therefore, evidence of nomological validity was provided for the instrument.

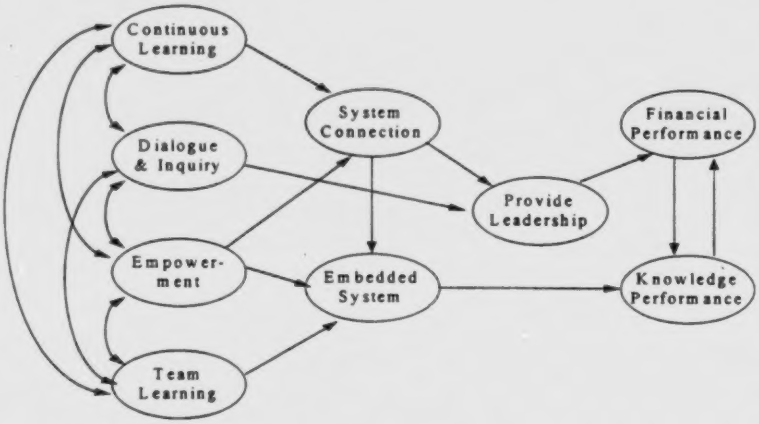

Figure 1. Proposed model illustrating the role of organizational learning systems and leadership as mediators of the relationships between individual learning and organizational outcomes.

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Evaluating Model-Data Fit In confirmatory factor analysis and structural equation modeling, a decision to accept or reject a model is typically made using an overall chi-square goodness-of-fit measure. A model is acceptable only if residuals between elements of the sample covariance matrix and the covariance matrix reproduced according to the model converge in probability to zero as the sample size goes to infinity. Nevertheless, the chi-square test is limited in testing various models because of its sensitivity to sample size. As sample size increases, even trivial residuals might increase the likelihood of falsely rejecting the model. Moreover, the chi-square test is established to determine a restrictive hypothesis that the model being tested is the true model with regard to a sample. In other words, the chi-square test demands a perfectly reproduced covariance matrix based on the theoretical model. As a matter of fact, most social/behavioral models are merely approximations of "reality" or "truth." Consequently, the chi-square significance test is limited in model testing practice and a variety of alternative statistics are proposed to determine the adequacy of the measurement and structural equation models (Bollen, 1989). Therefore, most researchers rely on a variety of alternative fit indices to reduce the dependence on sample size when assessing model fit. Because the various indices differ on their specific assumptions, researchers advocate that the models be judged using multiple fit indices that represent different families of measures of fit and one must take into account the degree of substantive meaning for a model (Bollen & Long, 1993).

This study selected six criterion indices including chi-square (χ^2) test, Jöreskog and Sörbom's (1989) goodness of fit index (GFI) and goodness of fit index adjusted for degree of freedom (AGFI), Bentler's (1990) comparative fit index (CFI), Bentler and Bonett's (1980) non-normed fit index (NNFI), and Steiger's (1990) root mean square error of approximation (RMSEA). The GFI and AGFI reflect the proportion of joint amount of data variance and covariance that can be explained by the measurement model being tested. The NNFI is a relative fit index which compares the model being tested to a baseline model (null model), taking into account the degrees of freedom. The CFI indicates the degree of fit between the hypothesized and null measurement models. The RMSEA represents a real advance in the evaluation of model fit from both statistical and conceptual viewpoints. Browne and Cudeck (1993) argue that because theoretical models are at best approximations of reality, the null hypothesis for any measurement/structural equation model (i.e., conventional chi-square test that the data fits the model perfectly) will rarely be true. Rather than testing the null hypothesis of *exact fit* between the covariance matrix of sample and that of model for population, RMSEA establishes a hypothesis of *close fit* between the model and population. RMSEA values of .05 or less indicate a very close fit between sample and theoretical model, accounting for degrees of freedom. Values less than .08 reflect reasonably good fitting models (Browne & Cudeck, 1993).

Results

Alternative Measurement Models Table 1 presents the fit indices of the three alternative measurement models in simple factor structure and a complex structure. A simple factor structure assumes that each item is designed to solely measure one factor and measurement errors are not allowed to be correlated. A complex factor structure is a more realistic model where items are permitted to load on second factor and measurement errors can be correlated. The modification index for the LISREL was examined to identify whether adding parameter to the hypothesized model was warranted. Specifically, 14 additional links were added to the simple structure model (eight of them were secondary loadings and six were correlated measurement errors). In evaluating measurement models, we did not rely on chi-square tests to assess overall fit because their sensitivity to sample size and other biases. Based on the selected fit indices, the proposed seven-factor model fit the data best among the alternative models examined. The seven-factor simple structure model accounted for nearly three-fourths of item variances and covariances (GFI = .741) and the modified model accounted more than 80% of the variance. Also, the values of the RMSEAs (all were less than .08) indicated that the proposed seven-factor structure formed appropriate measurement models (Browne & Cudeck, 1993).

Table 1. Fit Indices for Alternative Measurement Models in the Simple and Complex Factor Structures of DLOQ

	Simple Factor Structure			Complex Structure
Fit Index	Null Model	1-Factor	7-Factor	7-Factor
χ^2	11929.623	3973.612	2970.916	2353.365
df	861	819	798	784
χ^2/df	13.856	4.852	3.723	3.002
RMSEA	.166	.091	.076	.065
RMSR	.375	.068	.061	.052
GFI	.142	.661	.741	.802
AGFI	.098	.626	.707	.772
NNFI (TLI)	0	.700	.788	.844
CFI	0	.715	.804	.858

Note. RMSEA = root mean square error of approximation; RMSR = root mean square residual; GFI = goodness-fit-index; AGI = adjusted GFI; NNFI = non-normed fit index; CFI = comparative fit index.

Fit indices for the measurement model designed to assess organizational outcomes are presented in Table 2. The results indicated that the proposed two-factor model fit the data best among alternative measurement models being tested. Although this model failed to reproduce variance and covariance matrix close to the matrix from data (as indicated by moderate magnitude of the average residuals), the modified model formed an appropriate measurement model. The goodness-of-fit index reached .94, indicating that more than 90% of item variances and covariances could be explained by the proposed two-dimension factor structure. The average standardized residuals of the predicted covariance matrix from the observed one (as measured by RMSR) decreased from .081 to .048. The refined structure formed a measurement model with acceptable comparative fit indices (GFI = .944, NNFI = .891, and CFI = .924). The value of RMSEA (.079) suggested that the included 12 items had represented a very reasonable measurement model for the constructs of *Financial Performance* and *Knowledge Performance*, following Browne and Cudeck's (1993) criteria for model fit.

Table 2. Fit Indices for Alternative Measurement Models in the Simple and Complex Factor Structures of Organizational Outcomes

	Simple Factor Structure			Complex Structure
Fit Index	Null Model	1-Factor	2-Factor	2-Factor
χ^2	1826.900	516.393	438.4	179.800
df	66	54	53	46
χ^2/df	27.680	9.563	8.272	3.909
RMSEA	.239	.135	.125	.079
RMSR	.306	.084	.081	.048
GFI	.451	.839	.874	.944
AGFI	.351	.767	.814	.905
NNFI (TLI)	0	.679	.727	.891
CFI	0	.737	.781	.924

Overall, the results indicated that the proposed seven dimensions of the learning organization adequately explained the covariation of learning behaviors measured in the DLOQ, and that two-factor model of organizational outcome formed a reasonable measurement model in terms of mode-data fit. Therefore, items included in the DLOQ are thought to be adequate measures for the domains of learning organization dimensions and organizational performance outcomes.

Reliability Estimates Table 3 reports the reliability estimates for the dimensions of the learning organization measured in the DLOQ. The reliability was estimated by tau-equivalent model (commonly known as coefficient alpha) and congeneric model (Jöreskog & Sörbom, 1989).

The later one was included because it is a more accurate estimation in CFA contexts. The coefficient alpha for seven proposed dimensions ranged from .752 to .847 and the reliability estimates under CFA ranged from .787 to .870. The reliability estimates for two outcome variables were .709, .739 and .768, .779 under the tau-equivalent model and congeneric model respectively. Overall, the DLOQ showed acceptable reliability estimates for the seven proposed dimensions of the learning organization.

Table 3. Reliability Estimates for the Measures in the DLOQ

Subscale	Number of Items	Coefficient Alpha	Reliability Under CFA
Continuos Leaning	6	.789	.811
Dialogue & Inquiry	6	.848	.870
Team Learning	6	.835	.855
Embedded System	6	.798	.818
System Connection	6	.818	.840
Empowerment	6	.752	.787
Provide Leadership	6	.856	.877
Financial Performance	6	.709	.768
Knowledge Performance	6	.739	.779

Nomological Validity In order to establish the nomological validity for the instrument, structural equation modeling (SEM) method was used to examining the relationships between the seven dimensions the learning organization and the two outcome measures (*Financial Performance* and *Knowledge Performance*). The results of SEM suggested that the proposed nomological network illustrated in Figure 1 has a close fit to the data. Although the overall chi-square test of the model was statistically significant ($\chi^2(1357) = 4442.147$, $p < .01$), more significantly, the value of RMSEA (.069) indicated that the model-data fit is appropriate (Browne and Cudeck, 1993). The model also showed reasonable values on other comparative fit indices (GFI = .695, NNFI = .759, CFI = .772). In other words, about 70% of the joint amount of variance and covariance of the data could be accounted for by the model being tested.

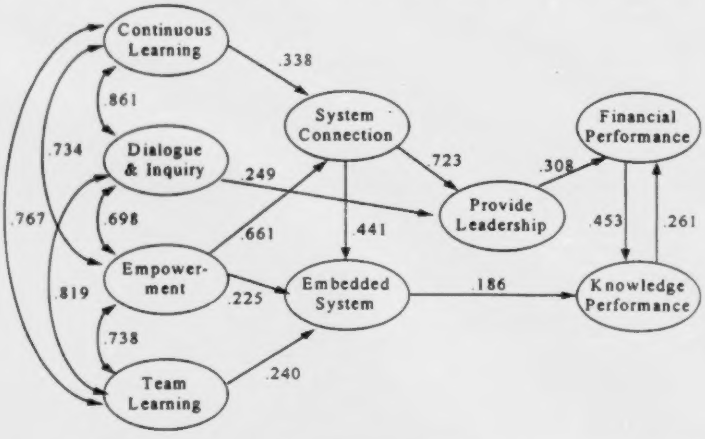

Figure 2. LISREL estimates of structural model coefficients for a proposed nomological model.

Figure 2 shows estimates of the structural coefficients for the nomological network. Each of these coefficients can be viewed as a standardized regression coefficient of one exogenous variable on its related endogenous variable when the effects of other variables were partialed out. All of the path coefficients were statistically significant and positive in direction. The results indicated that individual and group level learning activities, namely *Continuous Learning*, *Dialogue and Inquiry*, *Team Learning*, and *Empowerment*, had indirect significant effects on organizational outcomes. Three organizational level variables, *System Connection*, *Embedded System*, and *Provide Leadership*, served as mediators of the relations between the individual learning activities and organizational outcomes. However, these variable influence the organizational outcomes in different ways. While *Provide Leadership* was the only variable that had direct influence on *Financial Performance*, *Embedded System* affected the *Financial Performance* indirectly through *Knowledge Performance*. Also, *System Connection* was indirectly related to the organizational outcomes. The results suggested that while learning systems are important in absorbing individual learning activities, they had indirect impacts on the outcomes. *System Connection* appeared to be more important than *Embedded System* in determining organizational outcomes. The estimates of the path coefficients indicated that *System Connection* had strong relation with *Provide Leadership* (.723), which was moderately related to *Financial Performance* (.308). On the other hand, *Embedded System* had a little influence on *Knowledge Performance* (.186), which, in turn, showed also mild impact on *Financial Performance* (.261). Connecting organization to its environment may be much more important than creating systems to capture and share learning in an ever changing world. Perhaps as some organizational change scholars have noted, we no longer can afford the luxury of refreezing organizations but must instead move on to the next stage.

The organizational level variables have not only different impacts on organizational outcomes, but also have been influenced by individual learning in distinct ways. The efforts of connecting the organization to its environment (namely, *System Connection*) largely depend on continuous learning opportunities and empowered people with a collective vision. Moreover, creating systems to capture and share learning (in other words, *Embedded System*) needs at least two prerequisite conditions: people are empowered toward a collective vision and they are encouraged to participate in enacting that vision through collaboration and team learning. The more efforts were devoted to promote inquiry and dialogue among people within the organization (reflected as *Dialogue and Inquiry* in the scale), the more the leadership was provide to steer the organization in the right direction. This confirms Mintzberg's (1973) seminal research on managerial roles which suggests that leaders influence roles lead to the ability to perform informational roles which make possible better enactment of decisional roles. The estimates of the path coefficients from individual level variables to organizational level variables are in almost homogeneous magnitude (most in .20s and .30s except one path from *Empowerment* from *System Connection*). Therefore, these variables held similar importance to the organizational level learning. However, the estimate of the path from *Empowerment* to *System Connection* is about tripled that to *Embedded System* (.661 vs. .225). In other words, *Empowerment* are much more important for *System Connection* than that for *Embedded System*. Again, it is reasonable to expect that individuals are better able to scan their environment and build meaningful personal networks or systems for knowledge acquisition when empowered to move freely while the organization must create the technological and procedurally based systems which capture and manage knowledge.

The SEM results indicated that the squared multiple correction for the endogenous variable *Financial Performance* was .413 and .630 for *Knowledge Performance*. Put in other words, when operationalized as constructs, 41% and 63% of the variance of the two organizational outcomes variables were explained by the proposed structural equation model. It was not a surprise to find that more variance of the *Knowledge Performance* had been explained by the model than *Financial Performance* because the instrument was designed to measure learning aspects of the organization. Nevertheless, it was very encouraging to find that more than 40% of the *Financial Performance* could be attributed to the variables measured in the instrument. Certainly, there are other important variables which better explain financial outcomes [e.g., organizational size, access to raw materials, market niche, competition, etc.] than those included in the present study.
Overall, the results of SEM showed that measures of seven dimensions of the learning organization had significant impacts on organizational outcomes. A considerable amount of the variation of the organizational outcomes could be explained by the proposed nomological network. As all of the dimension of the learning organization are significantly related to others in the hypothesized ways, the nomological validity of the instrument is evident.

Discussion and Implications

The present study showed strong evidence of construct validity for the scale measuring dimensions of the learning organization. The study tested a factor structure of the dimensions of the learning organization, and confirmed that the learning organization is a multidimensional construct. The seven-factor structure of the learning organization proposed by Watkins and Marsick (1993, 1996) fits the data reasonably well. This structure will provide a useful framework for other researchers to study learning dimensions and their relations with other organizational performance variables. The DLOQ will provide a useful tool for researchers to assess dimensions of the learning organization.

Constructing a valid instrument is an on-going process. Further studies are needed for the scale with large sample size and different types of the organizations, particularly government or non-profit organizations. More studies are also needed to cross-validated the instrument with different populations of the organization, in order to firmly establish its utility and validity. Presently, the majority of respondents are senior or middle level managers or professional/technical employees. Studies with a broad cross-section of employees within the same organization are needed as well as studies across a large number of different organizations. Finally, an important use of an instrument such as DLOQ is to measure change across time as a way of determining whether and how active intervention to create a learning organization affects responses. It there a typical pattern of responses among newcomers to the learning organization? Does a different pattern of response emerge over time?

This study revealed a pattern of learning behavior in the organization. People who work in organizations can derive a variety of learning patterns by examples from their own activities. The study shows that there is an underlying structure that represents patterns of learning activities in the organization. This parsimonious pattern of learning and its relationship to organizational outcomes offer valuable and practical strategies for HRD practitioners who would work to create learning organizations.

References

Bollen, K. A. (1989). Structural equations with latent variables. New York: John Wiley & Sons.

Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. Bollen & J. Long (Eds.), Testing structural equation models (pp. 136-162). Newbury Park, CA: Sage.

Cronbach, L. J., & Meehl, P. E. (1955). Construct validity in psychological tests. Psychological Bulletin, 52, 281-302.

Fleishman, J., & Benson, J. (1987). Using LISREL to evaluate measurement models and scale reliability. Educational and Psychological Measurement, 47, 925-939.

Jöreskog, K. G. (1969). A general approach to confirmatory maximum likelihood factor analysis. Psychometrika, 34, 183-202.

Jöreskog, K. G. (1993). Testing structural equation models. In K. A. Bollen & J. S. Long (Eds.), Testing structural equation models (pp. 294-316). Newbury Park, CA: Sage.

Jöreskog, K. G., & Sörbom, D. (1993a). LISREL 8: User s reference guide. Chicago: Scientific Software.

Jöreskog, K. G., & Sörbom, D. (1993b). PRELIS 2: User s reference guide. Chicago: Scientific Software.

Mintzberg, H. (1973). The nature of managerial work. New York: Harper & Row.

Thompson, B., & Daniel, L. G. (1996). Factor analytic evidence for the construct validity of scores: A historical overview and some guidelines. Educational and Psychological Measurement, 56, 197-208.

Watkins, K. E., Marsick, V. J. (1993). Sculpting the learning organization: Lessons in the art and science of systemic change. San Francisco: Jossey-Bass.

Watkins, K. E., Marsick, V. J. (1996). In action: Creating the learning organization. Alexandria: American Society for Training and Development.

Watkins, K. E., Yang, B. & Marsick, V. J. (1997). Measuring dimensions of the learning organization. In R. Torraco (Ed.), Proceedings of 1997 Annual Academy of Human Resource Development Conference (pp. 543-546). Atlanta: GA.

The Japanese Human Resource Development System

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This paper provides a comprehensive model of the Japanese Human Resource Development (HRD)system, based on the current state of the art, including management practices and the work and discusses issues in changing in Japanese HRD. The focus of this discussion is on reviewing literature related to Japanese HRD, a model of the integrated HRD system, and future HRD activities in Japan. Some implications are also provided.

In literature, the development of human resources within Japanese companies has been discussed based on the following perspectives: (1) history of Training and Development (T&D) introduced after the Second World War (Robinson & Schroeder, 1993; Stern & Robinson, 1990; Warner, 1991; Wood, 1989), (2) Japanese management practices, focusing on lifetime employment and seniority practices (Jones & Villlines, 1987; Koike, 1987, 1995; Hanada, 1984), and (3) Japanese cultural influence (Cooney,1989; Durlabhji, 1990; Saha, 1990, 1992). Based on these three frames of reference, characteristics of the Japanese T&D activities can be described. For instance, life-time employment practice allows Japanese companies to invest in their human resources over a long term. Long-term Training and Development (T&D) is based on Japanese cultural values of continuous human growth and capability development, as people age through different employment and life stages with various experiences (Hanada, 1984; Uchida, 1993). In addition, T&D activities are influenced by Japanese human nature as well as management practices. For instance, senior skillful and knowledgeable employees often serve as trainers within Japanese companies, which networks across the company (Lindberge,1989,1991; Stern,1992). Cultural values influence a work attitude, characterized as "*kaizen*", referring to strive for values continuous perfection. Kaizen is felt in the performance of work and the attainment of the highest level of mastery in the work. To achieve the highest level of mastery, Japanese workers strive for continuous improvement (Durlabhji, 1990; Saha, 1990).

Problem statement

Three perspectives, history of T& D, management practices, and cultural influence, contributed to describing Japanese T&D activities and to gaining knowledge of the development of T&D within Japanese companies (Stern, 1992). However, the overview of the Japanese HRD system, including each of three HRD components within the system, has not been adequately discussed. More importantly, due in part to some changes (e.g., the emergence of new Japanese management practices, strategies among Japanese companies, etc.), the conventional HRD system may not be effective in responding to management changes, as well as organizational needs. Accordingly, HRD professionals in Japan have been asking in what ways new HRD should change. The purpose of this paper is to provide a comprehensive framework of current Japanese HRD system, which integrates management practices and the work system. In addition, this paper attempts to provide emerging new HRD activities in Japan by discussing critical issues.

Theoretical framework

To discuss the Japanese HRD system and to provide a model of the integrated Japanese HRD system, theoretical foundations of HRD and Japanese management are used in discussions. The focus of the discussion is divided into four dimensions: (1) Japanese HRD concepts, (2) Japanese HRD components, (3) the integrated HRD system and interaction effects, and (4) the emergence of new HRD in Japan.

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Japanese HRD concepts. HRD in Japan is influenced by Human Resource Management (HRM) practices and the work system. HRM practices include life-time employment and seniority-basedpractice while the work system includes the internal labor market, job rotation, a group-oriented work style, and job qualification competency rankings. From these influences, Japan has developed own human resource concept and system. The concept of human resources can be identified by 3 terms, based on the explanatory translation. These terms are "*Noryoku kaihatu*"(development of abilities),"*Jinzai keisei*" (formulation of a mastery level of human resources through work system and training), and "*Jinzai ikusei*" (fostering the development of human resources through management of a human resource process). As indicated, each term has a slightly different emphasis, however, all refers to the development of human resources and are used interchangeably (Kitazima, 1995; Koike, 1985, 1995; Hanada, 1987). Through these terms, it can be said that Japanese HRD highlights individual employees and their development of work abilities, in addition to various HRD interventions. HRD in Japan can be discussed from an outcome and process perspective. The outcome perspective of HRD refers to the development of desirable human resources, characterized by employees who acquire corporate knowledge and a high level of job competencies to use in the improvement of products or services (Suzuki, 1993; Yamada, 1990). The process perspective of HRD provides learning activities and opportunities through which employees grow and develop their job competencies by increasing potential human capabilities through their jobs experiences (Hanada, 1984).

Japanese HRD components. Three major HRD components are Individual Development (ID), Career Development (CD), and Organizational Development (OD). CD and OD are closely related to ID activities to ensure the improvement of individual performance. The following discussion focuses on each component of Japanese HRD.

Individual Development (ID). Japanese HRD focuses on ID and provides a broad range of learning activities and work experiences. The emphases of ID activities are for employees to attain a higher level of job mastery and competencies (Koike, 1995; Hanada, 1984). Learning activities include OJT, Off-JT, and self-development. OJT focuses on acquisition of job-related procedural know-how learned at the office, job-related information collected from various sources, and customer/client-related knowledge learned through customer interactions. Various Off-JT programs are provided based on:(1) levels of managerial rank, (2) orientation program, (3) job classification, and (4) levels of job competency (Kitajima, 1995). A self-development program for the improvement of job performance includes acquisition of job-related certifications through workshops, correspondence programs, higher education degree, etc., while a program for individual growth includes community services, hobbies, volunteer activities, etc.. Some unique aspects of ID within Japanese companies include the following. Employees are assigned to a program relative to OJT and some Off-JT. The use of subject matter experts within the company promotes knowledge and skills transfer from experts to novices and enhances networking among employees across the company. As such, the company can retain accumulated corporate knowledge and skills.

Career Development (CD). CD within Japanese companies is closely connected to job rotation and assignments, and to the Job Qualification Competency (JQC) rankings. JQC system is a process through which employees are able to increase their KSAs along with a rank of job competencies required for a particular job (Kusuda, 1994). Therefore, as employees go through job rotations and assignments, they acquire necessary KSAs at each rank and accumulate experiences related to the job. In this regard, Japanese management has considerable control and responsibility for providing developmental work activities, as well as training and educational programs relative to one's career development (Kusuda, 1994). There are two major career paths within Japanese companies: generalists and specialists. Generalists become managers through experiencing the number of job rotations, assignments, and transfers. In contrast, specialists are limited in the extent to which their specialty allows vertical career development in the company. Vertical career development within Japanese companies emphasizes seniority along with some consideration of job competency, based on a long-term evaluation process. Conversely, horizontal career development focuses on increased job competency and pay raises based on JQC rankings, with less emphasis on seniority (Kitajima, 1995; Yamada, 1985).

Organizational Development (OD). OD activities in Japan have a long history, which began with Professor Deming from the U.S., who taught quality concepts and techniques after the

Second World War. His quality concepts have been modified and the Japanese people have developed their own OD methods, such as Total Quality Control (TQC), Just-in-Time (JIT), and Quality Control Circle (QCC) through small group activities (Suzuki, 1985; Warner, 1994). OD methods within Japanese companies are integrated into a work process. Therefore, these methods allow the Japanese work system to facilitate continuous changes in work processes and environments. Aoki (1988) calls this " progressive conservatism". That is, the workplace adapts to continuously changing circumstances by using consensus-building and information flow, but it is rather conservative in terms of resistance to radical change. In addition, OD utilizes a variety of learning activities to bring about changes, which focus on the overall human system for the operational improvement of the organization. Learning activities related to OD take place as QCC and TQC activities, and through OJT and job rotation within work groups (Jones & Villines, 1987). The Japanese value of kaizen in the work context, referring to gradual on-going improvement, is molded into these small group activities. Employees involved in kaizen are expected to provide suggestions to improve jobs, not only for themselves, but also for others. As such, kaizen contributes to increased quality, customer satisfaction, and productivity, through state-of- the art technology and a constantly improved work force (Hanada, 1984).

The integrated Japanese HRD system and interaction effects. Japanese HRD has been influenced by management practices and the work system. Japanese management practices include life-time employment and seniority- based promotion and wages practices. The work system includes the Internal Labor Market (ILM), Long-Term Evaluation (LTE), Group-Oriented Work (GOW), and Flexible Job Rotation (FJR). Japanese management practices provide an overall frame for HRD while the work system indicates actual HRD activities. Figure 1 conceptualizes the current stage of the Japanese HRD system and its activities, illustrating the interaction effects of management practices and the work system on HRD in Japan. For instance, long-term Japanese HRD is due in part to life-time employment, seniority, and the internal labor market. ID interventions have a broad perspective, consisting of both learning and educational programs are provided to various levels of employees throughout their employment life in the company. In conjunction with the long-term evaluation and seniority based practices, CD activities are concerned with providing opportunities as well as developmental work activities with OJT through which employees increase their competencies and improve performance. OD activities often take place within a work unit and a work process, such as QCC, kaizen, and small group activities. Then, these activities are broken down to the individual performance level and are effective through group-oriented work and flexible job rotation. Group-oriented work and flexible job rotation allow employees to acquire essential KSAs of the job through OJT.

The emergence of new Japanese HRD. Recently, HRD professionals in Japan have raised questions of the effectiveness of the Japanese HRD system and activities. In addition, several shortcomings of Japanese HRD have been pointed out, such as a lack of professional knowledge and skills and career choice, as well as needs for creativity and flexibility (Ono & Suda, 1997). These shortcomings are due in part to changes in the business environment, corporate strategic planning, and the emergence of new Japanese management practices (Asahi, 1997; HRD, 1993). These changes require HRD in Japan to develop different sets of job competencies and employees' abilities to respond to organizational and individual needs (HRD, 1995; Konno, 1996; Yokoyama, 1991). This section will discuss several issues in changing Japanese HRD to seek the future aspect of HRD.

Issues for future HRD in Japan. There have been primarily two causes for changes in Japanese management practices and the work system (Onon & Suda, 1997; Takahashi, 1994). The most critical issue is the financial burden among Japanese companies, due in part to holding on to the number of excessive employees. At the same time, changes in the business environment, including a matured domestic market, changing consumer demands (e.g., quality and price) have required establishing new sets of strategies. This strategic change, including innovation, knowledge creation, value-added products, and corporate profitability (Konon, 1996; Nonaka & Takeuchi, 1995), also requires organizational structural changes. The following discussions focus on how these changes are closely related to changing HRD in Japan. Four major issues influence the emergence of a new Japanese HRD: (1) a linkage with business strategies, (2) new management practices, (3) a linkage between performance evaluation and the development of Human Resources (HRs), and (4) the Japanese work system (Hanada, 1996; HRD, 1993, 1997;

Konon, 1996; Ono & Suda, 1997). To conceptualize a possible future Japanese HRD relative to three components, a model of the changing Japanese HRD system (Figure 2) is proposed. It attempts to describe interactions among HRD components, new management practices, and the work system. These interrelations are based on management belief in Japan that human resources can be renewable and maximized through management of human resources (Kitajima, 1995).

As the importance of strategic planning increases, linkage between strategic needs (innovation, knowledge creation, value-added products, and corporate profitability) and HR planning has been imperative for identifying desirable human resources and types of KSAs, that are needed to be developed (Asahi, 1997). This linkage is related to Individual Development (ID) and Career Development (CD). Regarding to ID, desirable human resources have been portrayed as employees who have abilities to establish business strategies and to implement them into business units, to demonstrate strong leadership, and to create new business that brings profits to the company. These employees are innovative, creative, and flexible, as well as possessing highly specialized and professional knowledge and skills in business (HRD, 1993, Ono & Suda, 1997). To respond to these requirements, training and educational programs should focus on individual interests and needs assessment to balance corporate and individual needs. In addition, to develop human resources based on strategic needs, CD should encourage employees to take the initiative in individual career goals and CDP. In this regard, the role of HRD within a Japanese company includes interpreting business strategies and building a close relationship with Human Resource (HR) planning, which is integrated into ID and CD.

Another major issue for the future Japanese HRD is changes in management practices. New Japanese management practices are long-term employment and a merit- and competency-based wage system (HRD,1995; Morishima, 1997; Sasajima, 1997). Long-term employment for an organization leaves a possibility of layoff, while for an employee, it implies an opportunity to change to another company, based on career, salary, and other opportunities. Long-term employment is related to CD, that is, Japanese employees should be provided a broad career choice. Takahashi (1994) proposes four types of employment: entrepreneur (creating profitable business system), professional (assisting an entrepreneur), generalist (supporting a core business unit), and specialist (using highly specialized knowledge and skills in a core business unit). Each type of employment also indicates individual career paths. In this regard, individualized-CDP and dual career paths should be introduced. The role of HRD is to provide career counseling and other career services to help employees establish individual career goals and implement CDP. Regarding merit- and competency-based wage system relative to strategic human resource needs, ID activities should focus on the development of employees with core competencies relative to their career choices. One way to accomplish this is to provide management development programs, which facilitate individual learning needs and interests, as well as delineating core business competencies as a part of Off-JT.

Issues relative to the linkage between new performance evaluation and the development of human resources are concerned with performance appraisal practices and selection. These relate to CD and ID in the HRD system. New performance appraisal practice uses short-term evaluation and Management-by-Objective (MBO) in the assessment of individual performance (Morishima, 1997). Under this appraisal practice, Japanese companies carefully select those employees who become core business leaders in their early stage of employment. According to Hanada (1996), an individual career anchor is established within 6-7 years after employment. In this regard, the role of HRD in Japan should help not only identify potential employees for core business units, but also support the middle conduct managers performance appraisal effectively. Responding to these needs, Possible HRD interventions are management education, career counseling, and performance appraisal.

Lastly, change in the work system in Japan is influenced by organizational structural change. Structural change implies a flat organization with less management layers and a cross-functional business linkage. In conjunction with strategic human resource needs (highly specialized knowledge and skill), project-based job assignments should be frequently used in developing employees. Regarding OD with in the work system, Japanese companies have continued to undertake organizational reengineering, aiming at increasing efficiency in business in process (Asahi, 1997). In this regard, cross-functional work units, use of small group activities, and medium size of business units would be used. Focusing on business units, ID activities should be linked to types of projects or assignments to increase acquisition of KSAs.

Summary and Implications

New aspects of Japanese HRD, with three components, have been discussed based on changes in strategies and structure, management practices, and the work system in Japan. A model of changing Japanese HRD system was proposed (Figure 2). This section presents a summary of changes in the Japanese HRD system relative to 3 components: ID, CD, and OD.

Individual Development. Major issues in ID activities are Off-JT and acquisition of professional knowledge and skills. Two management development issues are needs assessment and program development. Needs assessment for management development programs should be closely related to strategic planning to respond to organizational needs. Relative to selection, management development training can be used to assess individuals for consideration as future business leaders. At the same time, MD programs should be open to all employees, based on individuals' career interests (entrepreneur, professionals, generalist, and specialist). The role of HRD is to provide training and educational programs for employees, who can take part in whichever programs they choose, based on individual learning needs and interests. Depending on individual CDP, the acquisition of highly specialized professional knowledge and skills in business can be achieved through project-based assignments in addition to job rotations and management training.

Career Development. The most notable change in Japanese HRD is in the area of CD. Providing a wide range of career paths and establishing CDP programs have been new to many Japanese companies (Ono &Suda, 1997). For CD activities to be effective, a CDP system should be established. A CDP system is a process that balances interests of human resources needs and individual career needs. The system should be under the CDP committee within the company, which helps both a company and an individual establish, adjust, and provide feedback on human resource planning and allocation, as well as individual career planning. To do so, a CDP committee also helps employees clarify career goals, necessary work experiences, knowledge, and skills. In addition, individual CDP should be connected to OD through balancing needs for business strategies and human resources planning.

Organizational Development. A flat organizational structure and cross-functional linkage have influenced OD methods. Recent OD methods involves business units, which can be project, committee, and/ or business alliances with other industries. A HRD system in Japan should focus on these OD processes to bring about changes and to increase organizational efficiency. To achieve this goal, according to Hanada (1996), organizational structure takes a flexible network that attempts to utilize the best individual employees with their KSAs. Within a network, individual employees are a member of some work or business units and each work or business unit is related to other units through individual networking. The role of HRD is to provide interventions, such as strategic planning and statistical analysis, team-building and cross-functional training, and leadership.

Implications. Based on the discussions on the conventional and the future direction of Japanese HRD, this section attempts to provide some implications. The proposed model of the future Japanese HRD shows organic interactions among functions of human resource management, the work system, and each component in the HRD system. Interactions among ID, CD, and OD describe interrelationships within the system, which provide ideas for how OD methods can be linked up to kinds of CD activities and broken down into ID activities. Such interaction effects can enhance performance improvement of an organization and an individual. Furthermore, interaction effects and a degree of interconnection among elements in the human resource cycle: Human Resource (HR) planning and allocation, evaluation, and compensation, can be used in identifying HRD issues when any element is changed. Such change indicates not only how HRD can contribute to improve performance, but also what changes should be brought into a workplace. In addition, the proposed model of changing Japanese HRD also indicates where HRD professionals can collaborate with other functions in an organization. By doing so, HRD professionals are able to build collaborative contributions, which result in increasing the reliability of the HRD function and HRD professionals. Illustrating both the conventional and changing HRD system in Japan shows dynamics of changes. A strategic linkage relative to changing HRD delineates an impact of relationships with each component: ID, CD, and OD. Therefore, HRD professionals can anticipate what changes might take place in the system when a strategy is changed.

References

Asahi, M. (1997). Change management to competency ni yoru jinji seido [Personnel management based on Change management to competency] . Human Resource Development, 9 (9), 38-45.

Business leader no ikusei system wo saguru [Search for a system of developing business leaders].

(1995, May). Human Resource Development, 7 (5), 8-17.

Cooney, B. D. (1989). Japan and America culture counts. Training and Development Journal, 43 (8), 58-61.

Durlabhji, S. (1990). The influence of Confucianism and zen on the Japanese organization. Akron Business and Economic Review, 21 (2), 31-45.

Feuer, D. &. L. C. (1988). The kaizen connection: How companies pick tomorrow's workers. Training, 25(5), 23-35.

Ford, J. B., & Honeycutt, E. D. (1992). Japanese national culture as a basis for understanding Japanese business practices. Business Horizon, 35 (6), 27-33.

Hanada, M. Personal Interview (May 13, 1996)

Hanada, M. (1984). Introduction to Management basics. Tokyo, Japan; The Center for Organizational Research and Education.

Ima naze kyouiku taikei no sasshin ka [Needs for the new training and educational system; Case studies].(1993, December). Human Resource Development, 5(12), 9-38.

Jones, F. B., & Villines, R. T. (1987). Japanese management: What is it and can it be used in education? Planning & Changing, 18 (4), 247-251.

Kawariyuku chingin seido [Changing wage system]. (1997. February). Human Resource Development, 9 (2), 6-30.

Kitajima, M. (1995). Jinji no Kihon [Basics of Personnel Practices]. Tokyo, Japan: Nihon Keizai Shinbun Sha.

Koike, K. (1985). Nihon no Jukuren: Jinzai Keisei no Shikumi [Skillfulness in Japan: The System of Human Resource Development]. Tokyo, Japan: Uzankaku .

Koike, K. (1995). Nihon no Koyou System: Sono Fuhensei to Tsuyomi [Japanese Employment System: Its universality and Strengths. Tokyo, Japan: Tokyo Keizai Shinpousha.

Konon. K. (1996). Korekarano jinji kaikakuno shitem [The future perspective of changing human resource management] . Human Resource Development, 8(11), 4-10.

Kurihara, T. (1993). Kyouiku kenshutaikei tsukurino shiten wa nanika [What is the point for designing the training and educational system?]. Human Resource Development, 5(12), 4-8.

Kusuda, K. (1994). Shokunou Shikaku Seido [Job Qualification System]. Tokyo, Japan: Keiei Shoin.

Lindberg, K. J. (1989). Revitalization of Japanese business and industry: Implications for training and orga`nization. ERIC, (ED 305 508).

Lindenberg, K. L. (1991). The intricacies of training and development in Japan. Human Resource Development Quarterly, 2 (2), 101-114.

Morishima, M. (1997). Jinzai tamen hyoka no houkou wo kangaeru [An analysis of multiple personnel appraisal]. Human Resource Development, 9 (7), 7-14.

Nakamura, J. (1996). Takiou kara souzou e [From flexibility to creativity]. Human Resource Development, 8 (11), 13-17.

Nakamura, J., Kurata, K., & Sugimoto. (1997). Henka no jidaino kyouiku kenshuy [Training and Education for a changing area]. Human Resource Development, 9(10), 8-30.

Nonoka, I., & Takeuchi, H. (1995). The Knowledge-creating Company: How Japanese Companies Create the Dynamic of Innovation . Oxford: U.K.: Oxford University Press.

Oishi, T., Takahashi, K., & Nagane. (1997). Kigyousoshiki to jinjino tameno aratanaru taigen. [New Suggestions for an organization and personnel] . Human Resource Development, 9(6), 2-45.

Oyamada, E. (1995). History of Personnel Education after the Second World War: The

Overview of Personnel Education in 1950's. Human Resource Development, 7 (1), 93-97.

Robinson, A. G. &. Stern. S. (1995). Strategic national HRD initiatives: Lesson from the management training programs of Japan. Human Resource Development Quarterly, 6 (5), 123-147.

Robinson, A. G., & Schroeder, D. M. (1993). Training, continuous improvement, and human relations: The U.S. TWI programs and the Japanese management style. California Management Review, 35 (2), 35-57.

Saha, A. (1992). Zen and industrial management in Japan. Journal of Managerial Psychology, 7(3), 3-9.

Saha, A. (1990). Basic human nature and management in Japan. Journal of Management Psychology, 5 (3), 3-12.

Stern, S. (1992). The relationship between human resource development and corporate creativity in Japan. Human Resource Development Quarterly, 3 (3), 215-238.

Suda, T. (1996). Jiritu jidaino career kaihatsuno arikatatowa [A method for career development for independence]. Human Resource Development, 8 (10), 4-13.

Suzuki, S. (1985). How the Japanese achieve excellence. Training and Development Journal, 39 (5), 110-117.

Uchida, M. (1993). Japanese workers growing more independent, self-motivated. Tokyo Business Today, 61 (4), 56-59.

Warner, M. (1994). Japanese culture, Western management: Taylorism and Human resources in Japan. Organizational Studies, 15 (4), 509-533.

Warner, M. (1991). Japanese management education and training: A critical review. Human System Management, 10 (2), 87-97.

Yamada, Y. (1990). Shain Kyouiku Nyumon [Basic for Corporate Training and Education] . Tokyo, Japan: Nihon Keizai Shinbunsha.

Yokoyama, M. (1990). Nine ways to proceed kaizen. Tokyo Business Today, 58 (11), 40-43.

Structured On-the-Job Training: Status, Impacts, and Implementation Issues in Singapore Organizations

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Singapore organizations were surveyed about the status, impacts, and implementation issues related to structured on-the-job training (OJT). The results showed that some form of OJT is one of the most frequently used training approaches and that there are perceived benefits for doing so. Implementation issues include how to accurately document the work and allowing sufficient time to deliver the training. The results suggest that recent efforts to encourage use of structured OJT through Singapore's National Productivity Board have been relatively successful.

In the past decade, structured on-the-job training (OJT) has received much interest among HRD professionals and organization managers, who are seeking to improve the performance of their organizations. Until recently, most OJT in organizations has been relatively unstructured in nature and thus ineffective. Unstructured OJT occurs when trainees acquire job knowledge and skills from impromptu explanations or demonstrations by others, through trial-and-error efforts, or simply by observing and then imitating the behaviors of others.

On the other hand, structured OJT combines the careful planning that is typically given to off-the-job training programs along with the inherent relevance and efficiency of training conducted in the actual job setting. Research has shown that structured OJT leads to reduced training times and fewer work defects than unstructured OJT (Jacobs & Hruby-Moore, In press; Jacobs, 1994; Jacobs, Jones, & Neil, 1992). Indeed, some form of structured OJT has become increasingly commonplace in many organizations.

Problem Statement

Recently, structured OJT has begun to receive attention from public-sector agencies concerned with economic development issues, particularly those agencies in developing nations or nations seeking to increase private-sector competitiveness. In particular, structured OJT helps address employee competence issues where no formal HRD function exists, a situation that is common in many small-to-medium sized organizations. Of interest here, Singapore's Productivity Standards Board (PSB) developed a program in 1993 called "OJT 2000," which encouraged the use of this training approach among such organizations in Singapore (Pious, 1994). In this way, the PSB in Singapore has sought to become a partner with private-sector organizations to help achieve both business and societal goals.

Although numerous studies are available that describe structured OJT practices and impacts within one organizational situation, few studies are available that describe structured OJT practices and impacts from a broader societal perspective, such as the present situation in Singapore. That is, how structured OJT is used and its effects across different organizations and business sectors. An exception is DeJong (1993), who conducted extensive case studies of structured OJT in various Dutch organizations. However, their results were necessarily limited by the number of case studied analyzed and the studies did not address issues of organizational impacts.

If structured OJT has been proven to be effective and efficient training approach in organizations, and if this training approach is to be used to help achieve economic development goals, then more must be known about structured OJT across more than one organization and business sector. Until now, this information has not been available. This information would also help evaluate the OJT 2000 program

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Therefore, the purpose of this study was to survey Singapore organizations to determine the status, impacts, and implementation of structured OJT. Such information should provide greater insights on patterns of using structured OJT related to organizational characteristics and business outcomes. Specifically, the evaluation research goals were the following:

1. Describe the present status of OJT in Singapore organizations.
2. Describe the perceived impacts of using structured OJT on organizational performance.
3. Describe the implementation issues in using structured OJT?

Method

A survey questionnaire was developed by the authors and its content validity was reviewed by a panel of HRD experts in Singapore and the US. The revised questionnaire was then pilot-tested among several partner organizations in Singapore. The final version of the questionnaire was seven pages in length and consisted of several response formats, depending on the information being gathered. Most items were presented in a five-point Likert format. The target population was all medium-sized organizations in Singapore from the transportation, manufacturing, construction, financial, and commerce business sectors, which were known to be using some form of structured OJT.

Organizations in these business sectors with less than 200 employees were omitted from the study. Approximately 1200 organizations were initially identified and were sent questionnaires. A cover letter was included from the Director of the Productivity Standards Board. Respondents were the human resource directors, quality supervisors, or line managers who were knowledgeable of the organization's use of training.

Results

The following section reports the descriptive information and the results for each of the research questions of the study.

Descriptive Information. There were 118 organizations that returned completed questionnaires, of which 114 were found to be useable. Thus, the return rate for the study was 13%. Of the 114 organizations, 44 were categorized as being from the manufacturing sector; 25 as being in the commerce sector, 20 as being in the transportation, logistics, or communications sector; 13 as being in the financial or business services sector; six as being in the construction sector; and, five as being other since they could not be categorized. The ownership of the organizations were as follows: 68 organizations were locally-owned; 32 were joint ventures; and, 14 were foreign-owned organizations.

In terms of employment size, 30 organizations had over 1200 employees; 14 organizations had between 1000-1199 employees; 15 organizations had between 700-999 employees; 17 organizations had between 500-699 employees; 13 organizations had between 300-499 employees; and, 23 organizations had less than 300 employees.

Present Status of OJT. Respondents were asked about how the extent to which they use OJT in their organizations and why they made the decision to use this training approach. Table 1 shows that across the 114 organizations, OJT is reported as the most frequently used training method. The results show that some form of OJT, either structured or unstructured, is the most frequently used training method in three of the five categories. OJT was reported as the second most frequently used training method in two categories.

Table 1. Frequency of Training Methods Across Categories

Training Method	*Category* Transport, logistics, or communication	Manufacturing	Construction,	Financial & business services	Commerce
OJT- str/unstr	32	51	50	33	49
Lecture	38	28	48	57	28
Workshop	11	17	0	17	15

Simulation	3	6	16	7	6
Case study	5	8	0	0	7
Computer-based	5	2	0	0	9
Self-paced - printed	0	2	0	0	0

Table 2 presents the ranking of factors which have influenced the decision to implement OJT in Singapore organizations. The results show that two factors -- changes in the organization and turnover -- was the highest ranked reason by 70 of the 114 organizations.

Table 2. Factors for Using OJT

Rank	*Factor*	*Number*
1	Installation of new equipment; change in critical work processes; changes in job tasks	40
2	Turnover of employees	30
3	Improve from present training method	14
4	Reduce number of errors, rework, rejected products	9
5	Overall improvement of quality outcomes	7
6	Response to customer complaints	4

Impacts of structured OJT. Table 3 shows the results of the questionnaire items concerning the impacts of structured OJT on specific quality indicators and affects on employees. The results show that respondents responded favorably regarding the perceived impacts of structured OJT.

Table 3. Impacts of Structured OJT

Item	*Mean*	*Standard Deviation*	*Range*
Frequency of defects or mistakes	2.11	.96	1-4
Frequency of customer complaints	2.3	.94	1-4
Amount of down time	2.4	.93	1-4
Response time customer concerns	2.8	1.0	1-5
Response time to fill orders	3.1	1.0	1-5
Annual absenteeism rate	2.6	.7	1-4
Annual turnover rate	2.7	.8	1-5
Ability to work independently	3.1	.4	2-4
Time required to learn new tasks*	3.0	.5	2-4
Conformance to quality*	3.2	.5	2-4

* Higher the mean indicates more favorable impact.

Table 4 presents the results of comparing the impacts between unstructured and structured OJT. The results show that structured OJT significantly affected business outcomes on two items. The remainder of the items showed that the mean for structured OJT was more favorable in all instances, if only slightly.

Table 4. Comparing Outcomes between Unstructured and Structured OJT

Item	Unstructured OJT		Structured OJT		*t* value
	Mean	Stan. Dev.	Mean	Stan Dev.	
Ability to work independently	3.0	.4	3.2	.4	3.08*
Annual absenteeism rate	2.8	.5	2.5	.7	2.14*

* $p > .05$

Describe obstacles in using structured OJT? Table 5 presents the ranking of the issues that hinder the use of structured OJT in these organizations. The results show that two issues -- difficulty in documenting the work and time constraints -- comprise one-half of the organizations in reporting their highest ranked issue.

Table 5. Ranking of Obstacles in Using Structured OJT

Rank	*Issue*	*Frequency*
1	Difficulty in documenting the work accurately, completely	26
2	Time constraints in delivering the training	26
3	Work disruptions caused by the training	15
4	Inappropriate education levels/prerequisites of employee	10
5	Not enough trainers to deliver the training	8
6	Indifferent attitude towards training in general	7
7	Lack of coordination among affected departments or personnel	6

Discussion

In summary, the results of the evaluation research study showed that some form of OJT has been adopted by many organizations in Singapore. In fact, the OJT was reported to be either the most frequently used training method or the second most frequently used training method in these organizations. In addition, the results showed that structured OJT was shown to have impacted business performance on a number of different performance dimensions. Compared with unstructured OJT, structured OJT showed impacts on ability to work independently and absenteeism. Finally, the results showed that the most critical issues for implementing structured OJT were documenting the work and time constraints to deliver the training.

The results suggest that OJT has become an integral part of many organizations in Singapore and that it has helped make valuable contributions in those organizations. In this sense, one can say that the "OJT 2000" project has been successful in this regard. However, It is unfortunate that the low return rate from participating organizations inhibits knowing the full extent of this success in more than a small percentage of Singapore organizations. However, it is interesting to note that the results confirm many of the issues identified in US organizations about structured OJT. Indeed, Osman-Gani and Jacobs (1996) showed that world-wide managers from one multi-national organization responded differently to their perceptions of various human resource development practices. Through factor analysis, these perceptions were clustered into six dimensions of countries. Yet, the results of the present study showed much congruence with issues identified by US managers about using structured OJT (Rothwell & Kazanas, 1990).

Perhaps, it can be concluded that, in some instances, the global economy has a leveling effect on organizations, in spite of the their particular national culture or location. This may be especially true in Singapore where attention to global competitiveness issues is especially keen. Clearly, more in-depth information about the characteristics and culture of Singapore organizations is required. Furthermore, it seems clear that follow-up case studies should be conducted, similar to Jacobs, Jones, and Neil (1992) which would help confirm the reported information in this evaluation research study.

References

deeding, J. (1993). Structured on-the-job training at Hoogovens Ijmuiden. *Journal of European Industrial Training, 17*(2), 8-13.

Jacobs, R., Jones, M., & Neil, S. (1992). A case study in forecasting the financial benefits of unstructured and structured on-the-job training. *Human Resource Development Quarterly, 3*(2), 133-139.

Jacobs, R. (1994). Case studies that compare the training efficiency and product quality of unstructured and structured OJT. In J. Phillips (ed.), *The return on investment in human resource* *development: cases on the economic benefits of HRD*. Alexandria, VA: American Society for Training and Development, 123-132.

Jacobs, R., & Hruby-Moore, M. (In press). A cost-benefit analysis study which resulted in unfavorable financial outcomes: learning from failure. *Performance Improvement Quarterly*.

Osman-Gani, A.A., & Jacobs R. (1996). Differences in perceptions of human resource development across countries: an exploratory study of managers in a multinational enterprise. *Journal of Transnational Management Development, 2*(3), 21-36.

Pious, J. (1994, July). *On -the-job training in Singapore: towards 2000*. Republic of Singapore: National Productivity Standards Board, Republic of Singapore.

Rothwell, W., & Kazana, H. (1990). Structured on-the-job training(SOJT) as perceived by HRD professionals. *Performance improvement quarterly, 3*(3), 12-26.

Transfer of Training Programs for Multinational Chain Hotels in Korea

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Transfer of training programs between countries has created a circumstance that enhances the knowledge and skills of human resources in developing or underdeveloped countries along with the influence of globalization in recent decades. This study explored the modification process of transferred training programs of multinational chain hotels in Korea. The cross-case analysis revealed that the transfer of training programs had certain patterns of modification shaped by the interacting factors in a three-level hierarchy: cultural and technical, organizational, and modifiers' personal level.

Transfer of training programs is one of the most influential fields of study that can narrow the economic gaps between the developed and the under-developed or developing countries (Baumol, 1986). International transfer of training programs has several meanings. In general, this means training programs that are developed in one country and that are used by other countries. For the purpose of this study, the meaning of international transfer of training programs is confined to the use of training programs developed in the headquarters of international organizations in one country by affiliated or branch organizations in hosting countries. In the private sector, the successful transfer of training programs between countries has been a critical factor for the success of multinational businesses in various organizations (Reynolds, 1990). Despite the critical influence of transfer of training programs on the success of a business, many companies have failed in preparing and implementing transfer of training programs that meet the needs and expectations of cultural, political, and economic situations of receiving countries.

The dramatic shift from products-oriented to service-oriented economies in recent decades has created a parallel transformation in the way organizations are conceptualized, structured and, managed (Albrecht & Zemke, 1990; Zemsky & Oedel, 1994). This means that organizations which place great importance on the design, development, and delivery of services are different from the organizations in product-oriented industries. Along with the impact of globalization and establishment of a world economy, the Korean hotel industry has encountered a dramatic change in its globalization and competing environment of service quality in recent decades (Choi, 1992). Consequently, appropriate transfer and customization of training programs of these hotels from foreign countries have become one of the critical factors for the success of hotel businesses.

Several authors (Ronen, 1989; Hansen & Brooks, 1994) have concluded, that there is limited empirical research literature about transfer of training programs and cross-cultural human resource development (HRD). To build a model of international transfer of training programs, applying a theory of technology transfer to transfer of training programs provides a conceptual framework for this study. Ruttan and Hayami (1973) explain three types of technology transfer between countries according to the level of transfer: material; design; and capacity transfer. Parallel with the three types of technology transfer, three types of transfer of training programs prevail between countries: (a) direct use of transferred training programs; (b) modified use of transferred training programs for local needs, and; (c) transfer of the capacity to develop training programs by the receiving country itself. In the direct use of transferred training programs from other countries, there is no need to modify the training programs for local use. This happens when the target population of the training and the cultural and legal environment of receiving countries are mostly identical. The modified use of transferred training programs occurs most frequently between countries. This is especially true for organizations in the private sector because many more companies have expanded their businesses into the global marketplace. This globalization trend requires trainers in recipient countries to modify those training programs developed in the chain hotel's headquarters to increase employee performance. For the third type of transfer of training programs between countries, Sullivan (1995) illustrates the transfer of capacity to develop training programs in three levels. Level one is for mastery of training content. Level two is a training

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skills course that teaches learning styles, presentation skills, coaching and evaluation. Level three involves the development of in-country master trainers who train the level two trainers.

According to the Korea National Tourism Organization (1997), there were 402 modern tourist hotels with 42,300 guest rooms in Korea in 1997. Among them, 25 hotels are classified as deluxe (five star) hotels and there are nine multinational chain hotels in Seoul. With the inception of the first multinational hotel in 1975 (Choi, 1992), there have been various patterns of management contract for the multinational chain hotels in Korea. Some hotels have been operated by the foreign general managers who control every aspect of hotel management. Other hotels have contracted only for the use of reservation systems and operation procedures of the multinational chain hotels. In any case, multinational chain hotels in Korea have used training programs developed by other countries such as the United States, Japan, and Switzerland, but have had problems in the use of those training programs because of cultural and technical differences in the training content and methods (Jin, 1992).

The purpose of the study is to explore the modification process of training programs of chain hotels in Korea and examine problems and issues in the use of transferred programs from foreign countries. The process of modifying foreign training programs by the local trainers is definitely a time consuming and agonizing process due to the cultural differences and language barriers in the modification process. There has been a lack of research efforts to identify a systematic process or conceptual model for the transfer of training programs between countries. Typically the local training agents modified foreign training programs based upon personal perceptions and experiences from previous modifications. This procedure often does not produce modified training programs that are of high quality. The information obtained from this study is expected to help training program developers develop training programs that fit the modification needs of the recipient countries. In addition, there is no established theory and model of transfer of training programs between countries in the disciplined field of study (Ronen, 1989; Hansen & Brooks, 1994). Therefore, the results of this study can be used to find a general pattern of transfer of training programs between countries and contribute to the theory building in this field of study and assist in the future development of a model for the transfer of training programs.

Questions for Investigation

This study focused on exploring the modification process of transferred training programs of multinational chain hotels in Korea and the trainer's perception of the appropriateness of the modification. The following research questions guided this study:

1. What are the reasons for the modification of the transferred training programs?
2. What are the procedures to determine the types of modification needed for the training programs before the modification?
3. Who conducts the modification of the training programs?
4. What kinds of modifications are made to the training programs?
5. How is the effectiveness of the training programs evaluated?

Methodology

The two major methods used for this study were mail survey and telephone interviews. A questionnaire was used to gather data from the training managers of all the nine multinational chain hotels in Korea. In addition, telephone interviews were conducted with eight of the nine training managers of the multinational chain hotels in Korea. The interview data were utilized to confirm and verify the information provided in the questionnaire. The data provided by the training managers in the questionnaires and the telephone interviews consisted of words in the form of rich descriptions (qualitative data), as well as quantitative data. Essentially, this study used a qualitative approach to answer the research questions. A quantitative method in the form of frequencies and percentages were also used to support the qualitative data. The qualitative method was considered as an appropriate way to explore the modification process of transferred training programs because of its descriptive nature to understand the whole of an event through insight and discovery (Bogdan & Biklen, 1992; Patton, 1990).

Instruments A questionnaire was developed to gather data from the training managers. The questionnaire was divided into five sections. The first section of the questionnaire asked for demographic information of the training programs. The second section asked for the reasons of the modification. The third section asked for the pre-procedures utilized to determine the needed modifications. The fourth section asked for the different types of program modifications. The fifth section asked for the methods utilized for evaluating the effectiveness of the training programs.

In addition, a telephone interview guide was developed, in order to obtain more in-depth information of the modification process from the training managers. The telephone interview guide was developed after reviewing the completed questionnaires. Specifically, the telephone interviews sought to collect the following information: reasons for the modification, examples and illustrations of modification procedures, and the training manager's perception of the effectiveness of the modification.

A study advisory committee, made up of three professors in Human Resource Development (HRD) from a major university in the United States of America reviewed the questionnaire, interview guide and study procedures. Also, a pilot study, involving three training managers of the same target population for the study was conducted to determine content validity and appropriateness of the questionnaire and interview guide. There was agreement by the study's advisory committee and the pilot test participants that the questionnaire and interview guide and the data being collected were appropriate for meeting the objectives of the study.

Population and Data Collection The target population for this research study included all nine training managers of the first and second level chain hotels (deluxe hotels) in Korea. Chain hotels in Korea are confined only to the first and second class hotels. The questionnaires were sent from the United State of America in October, 1996, by mail to the nine training managers of the chain hotels in Korea. A coordinator in Korea, who was selected by the researchers before the questionnaires were sent out collected the questionnaires and sent them back to the researchers. Of the nine questionnaires send, eight (89%) were completed and returned. Among the eight questionnaires returned, seven (88%) were from the first level chain hotels and one (12%) was from the second level chain hotel. After the questionnaires were received, telephone interviews were conducted with the same eight training managers during the month of December, 1996. The telephone interviews were used to validate the questionnaire data and obtain additional in-depth information on the modification procedures. Each interview lasted approximately 30 minutes.

The questionnaire was translated into Korean so that the participants could understand what information was being requested. The questionnaire was translated by one of the researchers whose native language is Korean. The telephone interviews were also conducted in Korean and recorded and transcribed. The questionnaire and the telephone interview data were then retranslated into English for data analysis and documentation.

The data from the questionnaires and telephone interviews were analyzed in two phases. First, for introduction of each hotel and the transferred training program, a general explanation of the hotel's size, the number of employees, and the content of the training was described. In order to seek the common patterns of themes and the likelihood of evolving theory from the raw data, the second phase of the analysis compared each hotel's pattern of modification process of the transferred training program (Gersick, 1988). Here, the five sections of the questionnaire were compared, analyzed, and described. By using this cross-case analysis frame, the researchers attempted to find the generalizations of the modification process of the transferred training programs of multinational chain hotels in Korea.

Findings and Cross-case Comparison

In the following section, a brief introduction of each of the eight hotels and the training programs are presented, followed by some of the major findings. Overall, there were no major discrepancies between the questionnaire information and the information provided by the study participants during the telephone interviews.

Description of the Hotels and Training Programs

Hotel Novotel Ambassador Seoul. The first hotel studied is a chain hotel newly constructed in 1994 in Seoul, Korea. The hotel has 500 employees and 336 rooms. The program is a supervisory training program for the supervisors of the hotel and was developed in the United

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States. The content of the training program contains self appraisal for supervision, basic supervision techniques, and case studies for application. In this hotel, the reasons of modification of the supervisory training program came from cultural differences between Korea and the United States. It was found that there was a difference in the hotel employees' conception of interpersonal relationship between the two nations. As Cyr (1993) indicates, Korean people are more emotion-oriented than the American and this creates slight differences in the way the two citizens perceive interpersonal relationships with others. For example, in Korea which is heavily influenced by the Confucian concern for hierarchy, harmony in group orientation and worker respect towards their managers play an important role in interpersonal relationships (Cyr, 1993). Because of this cultural difference in interpersonal relationships, the original content of the training program was not directly applicable to the trainees and needed to be modified.

Hotel Intercontinental Seoul. This hotel has 950 employees and 600 guest rooms, and was opened in 1987. The training program of the hotel is Guest Courtesy Training developed at the headquarters of the chain hotel in the United Kingdom (UK). The content of the training program includes basic service skills for guest service. Some interesting cultural differences that have required the modification of the original training program were found to exist. First, there were different ways of expression between the two cultures. In the UK culture, it is advised to use frequently feeling words, such as, "how are you?" or "how do you feel?" when guests check in. In Korean culture, it is not advised to use those feeling words in guest services because it not considered polite service attitude. Second, it was found that there was a distinct difference in the use of body language between the two cultures. Hand shaking is the most frequently used way of greeting in the UK culture while bowing (bending upper body forward) is the most common way of greeting in Korean culture.

Sheraton Walker Hill Hotel Seoul. Founded in 1961, the Sheraton Walker Hill Hotel Seoul is a franchise hotel that uses the same service standards of Sheraton chain hotels around the world. The hotel has 1,450 employees and 623 rooms. The training content of the Sales Account Management program of the hotel includes selling skills, managing key account, and identifying key customers. One of the main reasons for the modification of the training program developed in the United States is technical differences of the training. Management techniques of the original training program were not directly applicable to the sales people of the hotel because of different sales procedures between the two nations. For example, in Korea hotel product sales are heavily depend upon personal relationship between a salesperson and the client rather than the benefits and low price advantage of the product itself, which was emphasized in the original training program. The training manager of the hotel also indicated there was more modification of the initial modification of the training because of a translation error of the key concept of the training content.

Grand Hyatt Hotel. This hotel has 1,155 employees and 612 rooms, and opened in 1986. The train-the-trainer program of the hotel was developed in the United States and modified for the local needs of the hotel. The training content contains adult learning theory, planning and designing of instruction, instructional techniques, and use of training equipment. The reason for the modification of the training program was to accommodate the different service standards of each restaurant of the hotel. For example, Japanese and Korean restaurants have different service standards than the western style restaurants of the hotel. The original training program was modified to reflect the different service standards for each restaurant of the hotel.

Swiss Grand Hotel. This hotel has 650 employees and 400 rooms, and opened in 1986. The training program is a computer operation course which has the topics of computer operation for the front desk, reservation, and accounting. The training program was developed in Hong Kong. This hotel did not modified the training program because of two reasons. First, there was not enough time for the training manager of the hotel to modified the original training program. Second, the instructor who was a foreign computer specialist wanted to use the original training program without modification and translation because of the copyright concerns of the original training program.

Ritz-Carlton Seoul Hotel. This hotel has 800 employees and 401 rooms, and opened in 1994. The training manager of this hotel has modified a train-the-trainer program which was developed in the United States. The target population of the training program were supervisors, managers, and directors of the hotel. The purpose of the training program was to help supervisory staff of the hotel deliver service training for their own service outlet. The major training methods of the training program were instruction, demonstration, guided practice, and simulation. The reasons for the modification of the original program were two-fold. First, in terms of cultural aspects, service attitudes of the employees of the hotel was not identical with the suggested one from the original training program. For example, in guest service, required service attitudes of the original training program was not appropriate for the actual guest service of the local hotel. In Korean culture, politeness is considered as the key point of the guest service, while expertise and professionalism are considered as the most important virtue in Western service attitude. Second, in technical aspect, some of the service skills and procedures of the original training program were different from those of the local hotel. For example, the room cleaning procedures for the housekeeping section was not applicable to the local hotel's work environment.

Seoul Hilton Hotel. The Seoul Hilton has 714 rooms and 1,000 employees, and was established in 1976. This hotel has conducted various training programs from its headquarters in the United States, but seldom modified the original training programs. For example, the train-the-trainer program of the hotel that has been used to teach presentation skills to the in-house trainers had no modification for local use. The reasons for no modification of the original training program varied. First, the content of the training was very simple and easy to read. Second, most of the service staff were college graduates and could read and understand the English version of the training material and manual.

Westin Chosun Hotel. This hotel was opened in 1914 and has 477 rooms over 720 employees. This hotel also used a modified train-the-trainer program which was developed by Westin Asian Regional Headquarters in Singapore. The reasons of modification of the original training program were varied. First, the original training program was too long to implement at one time. The training manager of the hotel divided the original training program into three sessions to accommodate the local training needs. Second, there were some unnecessary training topics that were not applicable to the hotel's situation. These topics were removed or changed according to the local needs. After the modification of the original training program, the final approval of the modification was made by the general manager of the hotel. During the implementation of the training program, the instructors were advised to adapt the level of instruction reflecting the pre-experiences and skill levels of the participants. For program evaluation, video feedback and a checklist were used to improve the participants' instructional skills. Unlike other hotels, the training manager of the hotel provided both English and Korean version of training texts to the trainees in the earlier training sessions to check the appropriateness of the translation of the original training program.

Modification Reasons of Transferred Training Program According to the findings, of the eight hotels, six (75%) have modified training programs transferred from foreign countries. There were many reasons for modification of the transferred training programs. Related to cultural aspects, national culture has influenced the modification process of transferred training program to a great degree. Several cultural differences that have caused the modification of the training programs were identified, such as interpersonal relationship, legal issues, expressions in verbal language and body language, and service attitude and etiquette. Related to technical aspects, the service skills and procedures of Korean hotel outlets were slightly different from those of the countries which developed the original training programs. Of the eight hotels, two (25%) delivered the transferred training programs without modification. The reasons for no modification were because there was no need to modify the transferred program by the instructor or the transferred programs were very simple and easy to understand by the trainees.

In addition to the cultural and technical aspects, the findings also revealed other domains that influenced the modification of the transferred training programs. First, the differences in organizational culture, policies, and practices of the chain hotels in Korea have influenced the modification processes. These factors determined the degree of the modification of the training programs. These factors explain why some hotels modified all of the training material, even video dubbing, while other hotels modified only part of the training material, such as trainee handouts and trainer manuals. For example, in one hotel, HRD budget restriction was one of the factors that determined the degree of modification. Second, the personal expertise of the training manager to modify and translate the training was another domain required for successful modification. According to the modifier's level of expertise, the modification of some training programs were finished by a one time event or went through a second or third modification process after the initial modification.

From these findings, a hierarchy of modification reasons of the transferred training programs seems to emerge. In the upper level of the hierarchy, the cultural and technical differences between countries played the major roles of the whole modification process. In the middle level, the organizational factors (organization culture, policies, and practices) also influenced the range of the modification processes to a great degree. In the in-depth level, modifier's personal expertise determined the detailed quality of the modified training programs. All together, the influencing factors of the three domains were found to interact to each other to shape the specific pattern of modification of the training program of multinational chain hotels in Korea.

Modification Procedure The study results indicated that the following three phases comprised the whole modification procedure: needs assessment, modification, and follow-up modification. In the pre-stage of the modification, needs assessment before the actual modification affected the effectiveness of the modification. It was identified that there were two types of needs assessment: one that was conducted through actual survey, observations, and interviews with the target population of the training programs; and the other that was drawn from the training managers' conjecture of the modification needs of the training programs. Two (25%) of the hotels used needs assessment for the modification. One hotel's training manager conducted needs assessment through personal conjecture of the required training needs.

Three (38%) of the hotel training managers indicated that they conducted more modification of the initial modification of the training programs. The reasons for more modification were emerging needs to update new service standards after a certain period of time and the inappropriateness of the initial modification.

Evaluation of the Training Program The participants of the study were asked the effectiveness of the evaluation of the training program according to Kirkpatrick's four level evaluation model (Kirkpatrick, 1996). Level one of the evaluation model assessed the satisfaction of the trainees regarding the training. Level two evaluates the degree of knowledge acquisition. Level three determines to what extent there has been transfer of training on the job. Level four assesses financial return on training investment for the organization. Four (50%) of the hotels were using level 1, 2, and 3 for the evaluation of the transferred training. Two (25%) of the hotels were using level 1 and 2. Another two (25%) of the hotels were using level 1 or 2 only respectively. For level 1 evaluation, most of the hotels were using satisfaction sheet and for level 2, pencil and paper test. For level 3 evaluation, participants were using observations and feedback sessions with the trainees after a certain period of time from the training. Two (25%) of the training managers reported that level 3 was very difficult to evaluate because the change of service attitude after training was hard to be observed or evaluated in service training.

Other Findings

Modifier and instructor of the training programs. Modifiers of the transferred training programs were generally training managers of the hotels. For five (63%) of the hotels the modifiers were the training managers. For three (38%) of the hotels internal or external subject experts were consulted for program modification. In one hotel a subject expert was hired to do the modification. In most cases, instructors of the transferred training programs were identified as the training managers of the hotels. According to the content of the training, internal or external subject experts were utilized to deliver the training.

It is evident from the findings that the majority of the modified training programs were mandated by the hotels' headquarters or by the management decision. None of the hotel training managers had an opportunity to reflect the local training needs on the design or development of the original training programs. However, some training managers indicated that they had developed other training programs that were necessary to meet the local training needs when those mandated by the headquarters were not adequate. It seems that the headquarters of multinational chain hotels in Korea intentionally control the key training programs to keep the service standards of their hotels in a certain level across the nations.

Terminology and translation. Among the eight hotels, three (38%) of the training managers mentioned that their training program had a terminology section in the training manual. Of the three training managers, two had experienced that it was very helpful to understand the jargon and complicated concepts of the training content. The terminology section was also said to help in the translation and modification process of the transferred training programs. All six hotels which had modified the training programs had also translated the training materials. In five hotels, training managers translated the original materials and in one hotel an external translator was hired for the translation. Regarding literacy level, of the six hotels, four used college literacy level and the remaining two hotels used high school literacy level.

Training content and modification. Training content was also found to be one of the factors affecting the modification of transferred training programs. In the survey, four (50%) of the training programs were train-the-trainer programs. One (13%) of them was technical training, another one (13%) of them was for managerial skills, and two (25%) of them were related to guest service training. The findings revealed that some training programs had more modification needs than others because of the training content. For example, some train-the-trainer programs contained cross national training methods and content, so modification was not necessary. The findings also revealed that two (25%) of the hotels were employing modifications or modified uses of train-the-trainer programs at the departmental or sectional levels. The findings seem to indicate that culture insensitive training programs require less modification needs than culture sensitive training program in the initial stage. Also, culture insensitive training programs seem to be modified or customized at the application stage according to specific organizational needs.

Discussion

The results of this study reveals that most multinational deluxe chain hotels in Korea are experiencing transcultural transfer of training programs whether those are transferred for direct use or entail various patterns of modification of the transferred training programs. Two groups of professionals in the HRD field can benefit from the results of this study: training program users and developers of training programs. For program users of transferred training programs from foreign countries, this study provides several suggestions. First, it is strongly recommended to conduct needs assessment for the effective modification of the transferred training programs. The results of this study seem to indicate that involving internal and external subject experts in the modification of the subject area of the training will help avoid unnecessary modification processes. Similarly Lee (1994) and Moller (1995), noted that the roles of internal and external subject matter experts and instructional designers are different, but both influence the design of a quality training program to a great degree. Second, after a modification process, follow-up of the initial modification leads to ultimate success of the transferred training. For example, follow-up modification to update the outdated training content helps respond to new training needs of the target population. In addition, evaluation of the use of modified training becomes an important clue for more modification and successful transfer of training on the job. Third, modifier's expertise both in the subject matter and the modification process determines the quality of the modified training program. As one training manager indicated, "HRD staff have to have sufficient field experience to modify these kinds of training programs." Training managers' pre-experience in similar kinds of modification also decreased the need for additional follow-up modifications. Fourth, one thing that was advised for the modification of the transferred training programs in Korean chain hotels was systematic evaluation. None of the hotels in the study designed evaluation methods to screen the effectiveness of modification process at the planning stage. To determine the effectiveness of modification of transferred training programs establishing a systematic evaluation that is providing continuous feedback at each stage of modification process is critical for the ultimate success of the modification efforts (Cafferella, 1994; Johnson & Kusmierek, 1987).

The study results also provides valuable information for training program developer of multinational companies. The study showed an emerging pattern of modification which comprises a three-level hierarchy: cultural and technical factors of the upper level, organization culture, policies, and practices of the middle level, and personal expertise of the in-depth level of the hierarchy. From this, training program developers of multinational companies should take into account these influencing factors at all three levels in order to develop training programs that travel well across countries.

The transferred training programs of multinational chain hotels in Korea are not the only examples that encountered the modification processes mentioned above. Many chain hotels in other countries also require quality training programs from headquarters which entail modification processes for their own uses (Koss, 1995; Morical & Tsai, 1992). In any case, modification of some programs were more successful than others because of the influencing factors in the three-level hierarchy. All together, these factors interact with each other to shape a specific pattern of modification process of each training program. Among many suggestions for the successful modification, use of manuals, modules, and terminology were found to be very useful for the effective modification. Evaluation is another activity that decides the ultimate success of the modification efforts.

Future research should investigate the framework of this study in other countries and industries. Combined with qualitative study, extensive quantitative study will be needed to set up a model of international transfer of training programs between countries.

References

Albrecht, K., & Zemke, R., *(1990)*. Service America!: Doing business in the new economy. New York: Warner Books.

Baumol, W. J. (1986). Productivity growth, convergence, and welfare: What the long run data show. American Economic Review, 76, 1072-1085.

Bogdan, R., & Biklen, S. (1992). Qualitative research for education. (2nd ed.). Needham Heights, NJ: Allyn & Bacon.

Cafferella, R. S. (1994). Planning programs for adult learners: A practical guide for educators, trainers, and staff developers. San Francisco: Jossey-Bass.

Choi, Y. S. (1992). A study of manpower supply and training and development of Korean hospitality industry. Unpublished doctoral dissertation, Hanyang University, Seoul.

Cyr, R. (1993). Korean business communication: A course design and content checklist for intercultural training. Performance & Instruction, 32 (7), 17-22.

Gersick, C. (1988). Time and transition in work teams: Toward a new model of group development. Academy of Management Journal, 31, 9-41.

Hansen, C. D., & Brooks, A. K. (1994). A review of cross-cultural research on human resource development. Human Resource Development Quarterly, 5 (1), 55-74.

Jin, Y. S. (1992). Empirical study of training and education in Korea first level hotels. Unpublished master's thesis, Kyonggi University, Seoul.

Johnson, J. R., & Kusmierek, L. A. (1987). The status of evaluation research in communication training programs. Journal of Applied Communication Research, 15 (2), 144-59.

Kirkpatrick, D. (1996). Evaluating training programs: The four levels. San Francisco: Berrett-Koehler Publishers.

Korea National Tourism Organization. (1997). Korea tour home page: Accommodation. *KNTC*, http://www.knto.or.kr/ 6accom/index6.htm.

Koss, F. L. (1995). Looking at franchising's future. Hotel & Motel Management, 210, 17.

Lee, W. W. (1994). Subject matter experts and instructional designers: Making distinctions. Performance and Instruction, 33 (8), 23-25.

Moller, L. (1995). Working with subject matter experts. Tech [illegible]ends, 40 (6), 26-27.

Morical, K. & Tsai, B. (1992). Adapting training for other cultures. Training & Development, 47 (4), 65-68.

Patton, M. (1990). Qualitative evaluation and research methods. Newbury Park, NY: Sage.

Reynolds, A. (1990). Training that travels well. Training & Development, 45 (9), 73-77.

Ronen, S. (1989). Training the international assignee. In I. L. Goldstein & Associates (Eds.), Training and development in organizations (pp. 417-453). San Francisco: Jossey-Bass.

Ruttan, V. W., & Hayami, Y. (1973). Technology transfer and agricultural development. Technology and Culture, 14 (2), 119-151.

Sullivan, R. (1995). Training across international borders. Training & Development, 50 (6), 55-57.

Zemsky, R., & Oedel, P. (1994). Higher education and the changing nature of the American workforce: Responses, challenges, and opportunities. (EQW Working Papers WP21). East Lansing, National Center for Research on Teacher Learning (ERIC Document Reproduction Service No. ED 372 192).

Human Resource Development: The Key To Sustainable Growth and Competitiveness of Singapore

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The quality of human resources of a nation will determine their competitiveness in the 21st century. The well equipped and skilled human resources will contribute to individual, organizational and national development through improved performance. In Singapore's case, it has used its location and its human resources to the greatest possible advantage through effective human resource development strategies. It has succeeded in being included in the top five of the competitiveness lists each year. This paper examines the human resource development strategies adopted in Singapore and argues that there are lessons on human resource development at a national strategic level for other nations.

Of all the resources available to an organisation, human resource is the most important factor contributing to the sustainable growth for achieving organizational objectives irrespective of the status of economic development of the country in today's global business environment. However, most developing economies in their pursuit of economic growth fail to pay proper attention to human resource development (HRD) as part of their long term strategies. Instead, it has been observed that more often than not, less developed economies are keen to recruit foreign investments for their development, sometimes overlooking the significance on the investments in human capital to develop their own potential human resource. It has been increasingly realised of late that people are an important resource and a key element for continued national competitiveness (Porter, 1990;Hewlett, 1991). However, most of the attention paid to human resources at a national level has been confined to the realm of human capital and education (Shultz, 1963; Becker, 1985). Few nations have evinced an integrated human resource development strategy as part of its plans for sustainable economic development. Singapore is a unique instance.

In Singapore's case, human resource is a critical resource because it is the only resource that has enabled Singapore to succeed thus far in its economic development. Human resources are Singapore's single most important resource, which became a core element in its strategic economic plan (Ministry of Trade and Industry, 1991). In the early days of its economic development, the efforts at human resource development came under the rubric of "manpower development", ""general education," "technical education" and "training". As it moved from economic growth that is driven by investment to that which is driven by innovation, together with its emphasis on the regionalisation of business, human resource development strategies were found to be more sophisticated. It has become necessary to recruit professional talents and other qualified human resources from overseas and develop the knowledge and skills of local manpower. The human resource development strategies have been continuously revised and adjusted in conjunction with other national strategic economic policies. Singapore is, thus, a unique case which exemplifies the benefits of national human resource development policies and strategies. Although there were some studies done on micro-level human resource development practices, very little research has been done in this respect on the strategic and macro level (Osman-Gani and Toh, 1997; Osman Gani, 1996).

This paper seeks to outline the history of human resource development in Singapore, the current human resource strategies, and the elements of the human resource development infrastructure.

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Methodology

Apart for the location which is its competitive advantage, Singapore lacks the key attributes endearing it for international business success - capital and land. Labour is the only resource it has. Whilst Singapore grew in the early days of its economic development, leveraging on cheap labour, it is no longer the key strategy to which its economic success can be attributed. It is a miracle as Singapore has appeared to overcome its deprivations in factors of production (Kao, 1995). This paper is developed based on the findings from the relevant publications (government and academic) and other secondary materials on human resource development strategy of Singapore and its role in Singapore's economic development. The authors also draw upon interviews with selected key individuals involved in the development and implementation of the HRD strategies.

Findings

Recognising The Importance of Developing Human Resources In Singapore, human resource development has been a key strategy for economic growth since its early beginning. The importance of human resources was realised early with a strong emphasis placed on education and technical training. A perusal of the policies prior to independence, in the early days of self-government in 1959, reveals that the government ministers were far-sighted in realising that training and education of human resources are crucial for economic development. The architect of Singapore's early industrialisation, Goh Keng Swee (1961), a former Cabinet minister highlighted the importance of education and manpower training in his early policy statements. He highlighted it as the second vital requirement for economic development after capital, noting that, "The second vital requirement is know-how. This is not a matter of engaging a few experts ... It means raising the general education standards of the whole population. It also means the establishment of technical institutions, training centres and other facilities on a massive scale. This is a costly and long process." Since then, Singapore's education policies are tied to the economic needs of the nation.

The manner in which the human resource development strategy is implemented in Singapore can be illustrated by the technical education programme initiated in the early days of industrialisation. Singapore embarked on an industrialisation strategy in the 1970s with the aims of creating employment and generating income. Once the government decided to go for a rapid industrialisation strategy for national economic development, it embarked on an intense and determined strategy to develop and improve the technical education. A major restructuring of education took place with the introduction and emphasis on scientific and technical education in 1969 - a two-year course combining academic and technical subjects was introduced in the secondary school education for all boys and for 50% of the girls. After this two-year course, students were streamed into academic, technical or commercial subjects. Additional technical vocational institutes to serve the electrical, building and metal trades were established. A National Technical Institute (presently the Institute of Technical Education) was established in 1970; the student enrolment ratio between academic and technical education was reduced from 6:1 in 1968 to 2:1 by 1972; engineering and technology was emphasised at the tertiary level; and a new Ministry of Science and Technology was established in 1968 to co-ordinate the Government's science policies and the development of Singapore's scientific and technological manpower (Chew, 1971).

Similarly, human resource development came to the fore when there was economic restructuring in the early 1980s. The new industrial strategy to restructure and upgrade Singapore's manufacturing sector was promulgated in 1979 (Chng, Low, Tay and Tyabji, 1986). It emphasised higher value-added, skill and technology-intensive industries, thus posing challenges to the workers, unions and employers in the area of human resource development. Human resources had to be developed specially to make them familiar with automation, computer aided design and manufacture, and other modern technologies.

Integrating HRD with Other Economic Strategies It is clear from the Singapore case that human resource development is not taken in isolation in relation to the other aspects of national objectives in general and economic strategies in particular. A multidisciplinary or more accurately a multi-departmental approach to human resource development is adopted. The unique features of this approach are the multi-agency networks and tripartite institutions.

Multi-departmental Approach. Singapore adopts a multi-departmental approach to its national policy decisions, be it planning or implementation. The multi-departmental approach takes place formally in the form of permanent committees, councils or *ad hoc* committees; and informal meetings.

Manpower planning is the backbone of Singapore's human resource development strategy. Information about the future human resource needs of Singapore are ascertained by the Ministry of Trade and Industry and its various agencies such as the Investment Board. The information is collated by the Ministry and translated by the Economic Development Board (EDB) into targets for the specific skills required by the nation. These targets and the information forwarded to the Council for Professional and Technical Education (CPTE) for their deliberation. It is at this point that the relevant agencies provide feedback on the time frames within which they are able to attain those targets. The Council was formed in 1979 as a national body, chaired by the Minister for Trade and Industry, to set targets for education and training at all levels - determining the specific numbers of different skills to be trained by the universities, polytechnics, schools and the Institute of Technical Education (Chng, Low, Tay and Tyabji, 1986). The Council for Professional and Technical Education comprises members from various government departments. The current composition[1] is depicted in Figure 1 below:

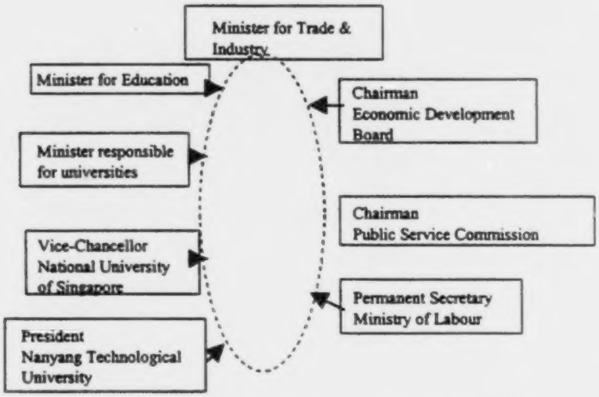
Minister for Trade & Industry
Minister for Education
Chairman Economic Development Board
Minister responsible for universities
Chairman Public Service Commission
Vice-Chancellor National University of Singapore
Permanent Secretary Ministry of Labour
President Nanyang Technological University

Figure 1: National Manpower Planning in Singapore

It must be acknowledged that the time lag between the demand forecast and the supply is a factor that works against this attempt to develop the required manpower resources (Chew,1971). However, the agencies work hard at overcoming this through longer term forecasts and swiftness in implementing plans.

Other examples of multi-departmental action can be seen in the Economic Committee formed following Singapore's first post-independence recession in 1983-84 to make recommendations on the Singapore Economy. This committee comprised key individuals from government and the private sector. Human resource development was significant in their recommendations under the headings of manpower supply, and education and training. Integral to the recommendations were upgrading of the workforce, continuing education, professional training, industry- and employer-based training, and the inculcation of flexible and creative skills.

Tripartism. Tripartism, the symbiotic relationship among the employers, the unions and the government, has been central to the success of Singapore's human resource development strategies. Although tripartism is not confined to human resource development, it features significantly in the HRD strategies. "The word is new and ... is not found in an English or American dictionary (Lim, 1994)." The Skills Development Fund (SDF), the National Wages Council, and the Productivity and Standards Board (PSB) are institutions that are based on tripartite partnership (government, employers, and employees). National human resource development strategies require the co-operation of all the relevant parties. In Singapore, the government participates both as employer and policy maker. The tripartite relationships ensure that there is agreement over the strategies and the necessary implementation steps. The policy of training and retraining of workers to upgrade them with skills for the economic restructuring in the early 1980s was possible only with the acceptance and co-operation of the unions. In the following section, the work of the National Wages Council and the Skills Development Fund are briefly outlined.

The National Wages Council (NWC) is a tripartite body with top level representatives from the government (in the form of the Permanent Secretaries), trade union representatives and employers' representatives (two from American MNCs, two from Japanese MNCs, two from German MNCs and four Singapore company representatives). The Council conducts an annual tripartite audit on changes in the Singapore economy, particularly in the wages sector in relation to the level of employment and unemployment, international competitiveness, equity to workers and employers, inflation rate and productivity enhancement (Lim, 1994). The aim of the thorough audit is to provide the Council with information to best set out the wage guidelines which form the basis of reference should employers and unions fail to agree on any important wage issues. The guidelines, though non-mandatory in nature, are used in wage negotiations and by the Industrial Arbitration Court in their deliberations. This Council plays an important role in human resource development at the national level as it is responsible for the motivational aspects in terms of compensation and other elements of the wage package. As it comprises all the relevant parties and functions on the principle of unanimity and strict confidentiality, the guidelines are widely respected and widely regarded as binding in practice.

The Skills Development Fund was created following a recommendation by the tripartite National Wages Council. The SDF board has representatives from the government, employers and unions. Professor Lim Chong Yah, one of the respondents to our study and founding chairman of the SDF and the NWC, recalls that he based the suggestion on an earlier scheme he was similarly responsible for in Malaysia. "Employers are not inclined to spend money on training unless there was a scheme to entice them to do so," Lim recalled. "The situation in Singapore was no different from the situation in Malaysia where the rubber plantation owners were reluctant to replant trees. A fund had to be created whereby owners had to make compulsory contributions from which they would be able to withdraw sums when they replanted." Hence, the Skills Development Fund to which employers contributed one percent of the wages of each employee whose salary is less than $1,000 a month or $2 per employee with wages less than $1,000 a month. The employers are motivated to send employees for approved training programmes as that is the only avenue for them to derive a benefit from their contributions. Under the SDF, employers who train their own workers could get substantial financial support from the SDF and the extent of support is not related to their own contributions (Lim, 1994). The SDF thus serves to motivate employers to send their employees for training and avail the subsidy from SDF for such training.

Providing Human Resource Development Delivery Systems Having neat plans are insufficient for human resource development at a national level, what is required is a host of delivery systems. In Singapore, the subsystems put in place address both specialised training and general education. The education systems provide training both on a formal and informal basis, and also address the issues of on-the-job training at the firm level.

Institute of Technical Education (ITE). Lower level technical education and training is provided at the Institute of Technical Education. It admits secondary school leavers for the technical training and it seeks to upgrade the technical skills for the workforce with the view of establishing a pool of highly skilled manpower to support Singapore's economic development (ITE, 1996). The type of technical education catered by the Institute encompasses apprenticeship training (there are 660 participating companies and 70 apprentice programmes), industrial skills courses leading to national technical certificates, customised skills training (tailored to the needs of enterprises), industry-based training (special courses organised by ITE in conjunction with selected industries) and worker education (primary and secondary school levels). ITE has a network of 11 technical institutes (TIs). They are located at population centres which are easily accessible by public transport. All TIs are connected to the corporate headquarters via computer. Each year, some 16,000 full-time training places are available at ITE.

General education programmes for the working population. A number of broad-based training programmes have been introduced and funded by the Skills Development Fund to address the level of education of the working population. The Basic Education for Skills Training (BEST) programme is targeted at workers aged below 40 years with less than the Primary School Leaving Examination (PSLE) qualification from all language streams and workers with secondary education below the Singapore-Cambridge University General Certificate of Education 'O' Level (GCE 'O') from non-English streams. It provides primary education in English and Mathematics. The Worker Improvement through Secondary Education (WISE) programme provides secondary education in English and Mathematics for workers with PSLE or BEST-4 level but less than GCE 'O' level education. Skills training is available for workers during the evenings and weekends under the Modular Skills Training (MOST) and Training Initiative for Mature Employees (TIME) programmes. Apprenticeships are also arranged for young people. To encourage housewives and retirees to rejoin the workforce a new programme entitled Back To Work (BOW) was launched in September 1996. The BOW programme is the result of a tripartite effort by the government, union and employers to meet the manpower challenges as Singapore moves ahead in the next phase of economic development. The Singapore Productivity and Standards Board (PSB) and the Ministry of Labour (MOL) are spearheading the new programme being implemented together with the Singapore National Employers Federation (SNEF) and the National Trades Union Congress (NTUC).

Firm Level Training. The Productivity and Standards Board (PSB) and its predecessor, the National Productivity Board collaborated with leading private sector companies to establish national training programmes. Some twelve partnership programmes have been established since 1988. At the firm level, the PSB encourages and provides training for firms wishing to introduce structured on-the-job training (SOJT). The SOJT has seen considerable success in a number of large firms. It has enabled firms to continue to operate efficiently even in Singapore's tight labour market. The objectives of OJT2000 plan have been achieved much earlier than the stipulated period.

Being Daring and Innovative One other explanation for the success of Singapore's human resource development strategies lies in the willingness on the part of the nation to be bold and innovative in their strategies. The boldness is illustrated in the system of streaming that occurs in the education system, the emphasis on human resource development as a key strategic thrust in Singapore strategic economic plan, and the measures that have been put into place to address the needs and skills required in the economy by recruiting them from overseas. A brief description of the unique features of Singapore's education system is provided below in this context.

Singapore's Education System. Singapore's education system is integrally linked to its human resource development strategies. This link was partially shown by the earlier discussion on the role of the CPTE. The education system is structured upon meritocracy and a series of filters are used that stream each cohort of students into the relevant vocations and institutions. A schematic diagram of the education system is shown in Figure 2. Primary education begins at the age of seven after 2 years of pre-schooling. One can observe that the first hurdle or streaming exercise takes place at the end of the fourth year of education at the age of ten. There is another selection exercise at the age of nine to select gifted students for an enrichment programme that is within the primary education system. The recent exercise in 1997 saw a total of some 53,770 students vie for a place in the programme. The results from two rounds of selection were recently announced. 3,000 students were selected after the first round. Finally, 440 students were selected and offered a place in the programme (Ministry of Education, 1997). The degree, to which selection based on the abilities of the students, is applied in the education system and is an example of the boldness with which the authorities act in human resource matters. There are limited places in the universities because there are currently two comprehensive universities offering full-time degree courses with an additional open university based on the U. K. Open University model. The places for the various disciplines are partly determined by the CPTE as mentioned earlier. The types of programmes offered at the post-secondary and university levels are determined by the human resource needs of the country. At the primary and secondary levels, human resource development is visible in the introduction of creative thinking and computer literacy subjects, which are relevant for an economy that the planners intend to be based on innovations and creations and in tune with the information age.

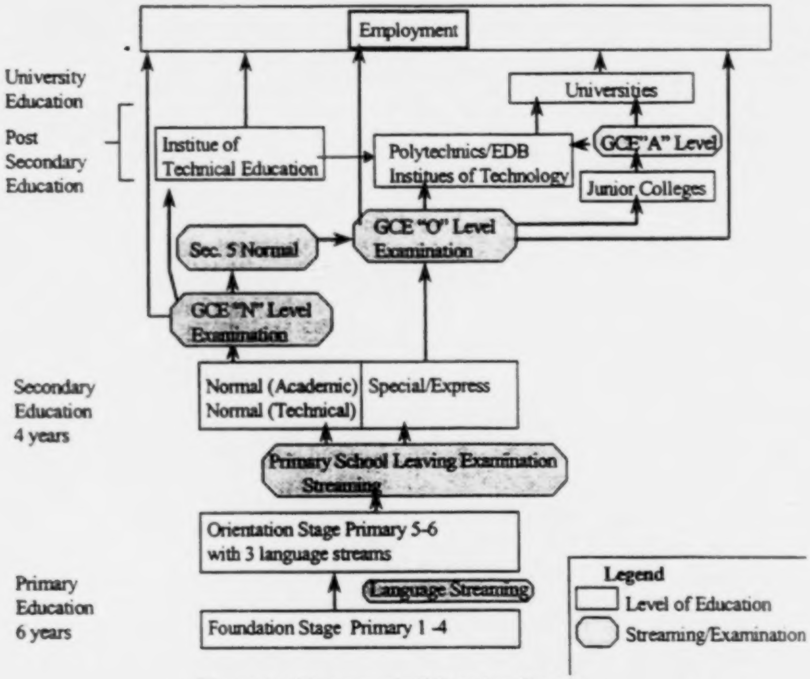
Employment
University Education
Universities
Post Secondary Education
Institue of Technical Education
Polytechnics/EDB Instiues of Technology
GCE"A" Level
Junior Colleges
Sec. 5 Normal
GCE "O" Level Examination
GCE "N" Level Examination
Secondary Education 4 years
Normal (Academic) Normal (Technical)
Special/Express
Primary School Leaving Examination Streaming
Orientation Stage Primary 5-6 with 3 language streams
Primary Education 6 years
Language Streaming
Foundation Stage Primary 1-4
Legend
Level of Education
Streaming/Examination

Figure 2 : Singapore's Education System

Singapore's Recent HRD Policies. HRD has gained increased attention as a key element of Singapore's strategies - it is now considered a Strategic Economic Thrust. In 1991, a government committee identified enhancing human resources as the top strategic thrust for Singapore (Ministry of Trade and Industry, 1991). These eight thrusts are shown in Figure 3.

Thrusts of Singapore's Strategic Economic Plan (SEP)	
Strategic Thrust 1	Enhancing Human Resources
Programme 1:	International Manpower Program
Strategic Thrust 2	Promoting National Teamwork
Programme 2:	Establishment of an Economic Panel
Strategic Thrust 3	Becoming Internationally Oriented
Programme 3:	Preparing Singaporeans for International Assignments
Programme 4:	Promoting the Growth Triangle and Business Alliances with the Region
Programme 5:	Developing Information Infrastructure
Strategic Thrust 4	Creating a Conducive Climate for Innovation
Programme 6:	Reviewing Government Rules which Hinder Innovation
Strategic Thrust 5	Developing Manufacturing an service Clusters
Programme 7:	Implementation of Cluster-based Development Plans
Programme 8:	Cluster Workshops
Programme 9:	Improving the Bond between Employers and Employees
Programme 10:	Improving the Overall Balance between Supply and Demand of Labour
Strategic Thrust 6	Spearheading Economic Redevelopment
Programme 11:	Multi-Agency Task-force on Economic Redevelopment
Strategic Thrust 7	Maintaining International Competitiveness
Programme 12:	Establishment of a Competitiveness Monitoring Group
Strategic Thrust 8	Reducing Vulnerability
Programme 13:	Establishment of a Scenario Analysis Group
Programme 14:	Strengthening the Home-base Character of Multinational Companies

Source: (Wong and Ng, 1993)

Figure 3 : Strategic Economic Plan of Singapore

The committee found that various aspects of Singapore's "soft" infrastructure (non-physical and capital resources of an economy that make it dynamic) needed improvement. Two of these are addressed by the human resource development thrust: education and training, and human resource quality. Three areas for the enhancement of human resources were earmarked for implementation, namely:

- Increasing the supply of top echelon of talented and professional people.
- Adopting life cycle perspective for the education and training programmes.
- Introducing a programme to accelerate the upgrading of the working population with an education level of primary 6 or less (i.e., less than 6 years of schooling).

The Committee also recommended as another strategic thrust, the creation of a conducive climate for innovation. Although human resource development is not specifically mentioned under this thrust, human resource development is required as training and development in the areas of technology, creativity and innovation are required.

International Manpower Programme. This is a programme that was introduced after the Committee's report in 1991, to attract international talents. This programme involved, making adjustment to the existing immigration rules to facilitate talented people to Singapore and establishing a network of Singapore Clubs around the world to reach out to individuals who are positively inclined towards Singapore. In addition to these two measures, efforts have been made to establish a scientific habitat to attract R & D manpower and in conjunction with this, the establishment of research centres. The National Science and Technology Board (NSTB) is responsible for the Research Scientists and Engineers Programme (discussed below).

Local Enterprise Scholarships. These scholarships are a reflection for the HRD strategy towards grooming human resources for local enterprises. The EDB offers scholarships to build a strong team of middle-management and technical personnel for the long-term growth of promising local enterprises. The scholarship program was launched in 1996 and the EDB intends to offer one hundred such scholarships over a five-year period. Nine companies participated in the inaugural programme to sponsor 17 scholars.

R & D staff. The National Science and Technology Board (NSTB) fund the Research Scientists and Engineers Programme that is aimed at attracting trained postgraduate scholars from all over the world and placing them in universities or research institutes for an initial period of up to three years. The NSTB also administers the Research and Development Assistance Scheme through which qualifying companies can obtain support to cover costs incurred in R&D manpower. The NSTB's Research Incentive Scheme for Companies provides support for companies to develop in-house R&D capabilities in Singapore - manpower being one of the fundable costs.

Conclusion

Singapore provides an interesting case-study of human resource development as a national strategy. The human resource strategy is integrated with the economic and national strategies for the nation. There exists a national structure of government agencies and organizations responsible for planning and implementing the strategy. This paper has sought to provide a brief account of the Singapore case by identifying the role of the relevant institutions for national HRD strategies. There are lessons that other economies can emulate. However, an important caveat has to be noted. There is a unique incidence of factors - committed government, a network of agencies and tripartitism. These factors may have arisen by design in some cases, and in others they may have evolved through the press. Having mentioned the caveat, the Singapore case does indicate that governments seeking to pursue national human resource development strategies need to have these strategies integrated with other national objectives. Further, the planning, implementation and evaluation of the strategies need to be multi-departmental in approach. The tendency to leave the area to a specific government agency whilst placing it in the hands of specialists leaves out the possibility of implementation across the various levels in the economy. The single agency approach also often leads to the omission of other considerations that other departments may be able to provide.

References:

Becker, G.S. 1975, *Human Capital*. Columbia University Press: New York.

Chew, D C E, 1971, Investment in Human Capital in You, P.S. and Lim, C. Y. (eds.) *The Singapore Economy*, Eastern Universities Press Sdn. Bhd.: Singapore.

Chng, M. K., Low, L., Tay, B.N., and Tyabji, A., 1986, *Technology and Skills in Singapore*. Institute of Southeast Asian Studies: Singapore.

Goh, K. S. 1961, Differences in Economic Development Problems as between Singapore and other Asian Countries in *Commerce*,1(4), Nanyang University Commerce Society: Singapore, reprinted in Goh K. S. 1972, 1995, *The Economics of Modernization*, Federal Publishers.

Lim, C. Y., 1994, Riding the waves of change together: A global perspective of the impact of HRD on the economy. Keynote address, 1994 World Productivity Assembly and Human Resource Development (HRD) Asia Conference, 25 October 1994, Singapore.

Ministry of Education, 1997, Recorded from a briefing to parents of children selected for the Gifted Education Programme at the Anglo-Chinese School (Independent) on 20 November 1997.

Ministry of Trade and Industry, 1993, *Implementation of the Strategic Economic Plan*, Ministry of Trade and Industry: Singapore.

Osman-Gani, A. M. and Toh, T. S. 1997, Manpower strategies for regionalization of business operations in the Asia-Pacific: A study of Singapore based companies, *Journal of Transational Management Development*, 3(1): 75-91.

Osman-Gani, A.M. 1996, International human resource development, in Thong, T.S. (eds.) *Human Resource Issues in Singapore*, Addison-Wesley: Singapore.

Porter, M.E. 1990, *The Competitive Advantage of Nations*. MacMillan Press: London.

Schultz, T. W. 1963, *The Economic Value of Education*. Columbia University Press: New York.

Tan, W.L. 1998, A legal perspective of the National Wages Council, in Chew, R. (eds.) *Wages and Wage Policy in Singapore*. (forthcoming).

Thurow, L.C. 1991, Human resource development as an aspect of strategic competition. MIT-NTU Conference, 6 June 1991, Singapore.

Wong, P.K. and Ng, C. Y. 1993, Singapore coping with a mature economy, *Southeast Asian Affairs*, 313-23.

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ENDNOTES:

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[1] The current composition of the Council for Professional and Technical Education was provided by the Deputy Director responsible for the CPTE at the Ministry of Trade and Industry.

Self-directed work teams: implementation and performance

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In this paper the results of a study focusing on the implementation and effects of self-directed work teams in a land register office are discussed. Results show that the implementation is partly successful. The degree of implementation varies between teams but more significantly the extend of implementation varies between the clusters whereto teams belong. The role of the HRM department in the process of implementation is limited.

Increasing attention is paid to teams as an effective mode to organize work. Teams are perceived as an adequate response to developments such as increased global competition, higher demands with regard to efficiency, production pace and flexibility, increasing complexity of work processes (Fischer, 1993; Fousert, 1996). Further it is expected that organizing work in teams will strengthen employees' involvement, and will impact positively employees' perception of the organizational climate and reduce absenteeism (Amelsvoort & Scholtes, 1994; Ray & Bronstein, 1995).

Self-directed teams are the most autonomous type of teams. These teams have a high level of autonomy regarding the prosecution of tasks and the improvement of the production process. Typical for self-directed work teams (SDWT) are the following characteristics (Luer & Palleschi, 1994; Wellins, Byham & Wilson, 1991):

- completeness: as a team the members are responsible for a specific part of the production process;
- redundancy of functions: team members are able to perform various tasks;
- autonomy: the team members as a group are responsible for the planning of activities, coordination with other teams, evaluation of team performance, improvement of the work processes, and budget issues;
- transformation of management: since the team members are responsible for traditional management tasks, the manager will serve as a coach and team facilitator.

Problem statement

Although many advantages are associated with the introduction of SDWT, the implementation of these teams frequently encounters serious problems. The main problems are: lack of training for team members to master new tasks; insufficient training of team members communication skills and other social skills; opposition of management; absence of explicit team goals, lack of information; time pressure (Overdijk, 1996; Wellins & George, 1991). If no solutions are found for these problems there is a serious threat that the implementation fails and groups remain random collections of individuals in stead of groups with shared tasks, responsibilities and common goals. The idea of teams is popular but research focusing on implementation and organizational benefits of the introduction of teams is rather scarce. Further, it is obvious that the HRD department should be involved in organizational developments such as the establishment of teams, but the type of interventions remains unclear in literature. Most phrased recommandation in literature with regard to HRD is the emphasis on training of team members in social and communication skills.

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Research questions

The need to grasp more insight in the implementation of teams and the role of the HRD department within this process was the starting point for conducting research. In this paper findings are presented stemming from a research project that investigated the implementation and effectiveness of self-directed work teams (Ter Horst, 1997b). In the research project the following research questions were central:

1) Is the concept of self-directed teams actually implemented?
2) Which factors inhibit or promote the implementation of self-directed work teams?
3) are the goals of the implementation achieved?
4) What is the contribution of the HRD department to the implementation of self-directed work teams

Organizational context

Reason for the study. The research project was carried out in a large organization: the land register office. In every region a land register office is available. The land register office was always a state enterprise but in the coming years privatizing will be the main issue. This means that the land register office must place more emphasis on delivering high quality services to (new) clients in order to compete successfully with private companies. Originally the organization was rather hierarchical, bureaucratic and Tayloristic. To establish an organization that has more potential to serve the clients' requests since 1995 self-directed work teams are implemented. While in the old organization work tasks were combined into departments (functional division of tasks), in the team-based organization all land register tasks were combined into teams that serve clients in a specific geographic area for a wide range of services. Due to restricted sources the research project focused on the SDWT in one regional land office.

New organizational structure. In total nine teams were established in this regional land office. These teams are divided into two clusters. One cluster (named LLZ), consisting of six teams, focuses on the measurement of properties and the storage of land register information. The other cluster (called BJZV) consists of three teams and they deal with the legal aspects of land register services. Both clusters have their own cluster manager and every team has a team manager. In this organization there exists no separate HRD department. There is a small HRM department whit two staff members.

Implementation of the teams. In this regional land office the first steps towards the introduction of SDWT were made in 1993 with the establishment of a task force wherein, among staff members, employees of all departments were represented. This task force investigated the feasibility of the introduction of SDWT. As a result of this investigation pilot teams were formed in the beginning of 1995 and a few months later all employees were allocated to teams. The organization stated that at the end of 1996 the implementation should be concluded and completely autonomous SDWT should be operational.

Methods

Three instruments were used for data collection: a questionnaire for team members, a questionnaire for team managers and cluster managers and additional interviews with key-employees involved in the implementation of the teams. Due to the limited space only attention will be paid to the survey among the team members.

Survey. To collect information of team members written questionnaires were found to be the most adequate instrument. The choice for a survey was also based on the experiences with a previous evaluation in this organization. In the previous evaluation, carried out in 1996, group interviews with team members were used to collect data. Team members complained about this data collection procedure because they experienced that not all their comments were incorporated in the final evaluation report. Although group interviews, compared to written questionnaires, have the major advantage to collect more in-depth information the previous experiences of team members with group interviews could reduce their willingness to cooperate. Further, written questionnaires have the advantage that the anonymity of respondents is guaranteed. The following topics were included in the questionnaire. 1) Characteristics of team members such as age, job description and seniority. 2) Attention was paid to the preparation of employees before teams were implemented. In total nine items with four-point rating scales were formulated that focused on the employee's knowledge concerning the reasons for the introduction of SDWT and the changes in employee's tasks and responsibilities. 3) Based on a study of available documents within the organization and a review of literature twelve items were formulated that reflected the problems that might occur in teams. Examples are: cooperation between team members, working without direct supervision; uncertainty of the employee regarding his role in the team, uncertainty of the employee regarding new tasks to master. For every problem team members were asked to rate whether this was a problem for them at the start of the SDWT (1995) and at the time of the survey (May, 1997). Items had a two-point scale (yes/no). 4) If respondents rated the above mentioned problems with 'yes', they were asked to fill in what activities were undertaken to solve the problem. To assist respondents seven possible activities were mentioned in the questionnaire, such as assistance of team manager, attending training, discussion with colleagues, assistance of the HRM-department. 5) To measure the degree of current self-directedness of the teams respondents were asked to rate 15 items regarding the responsibility for traditional managerial tasks in their team. These items were previously used by Amelsvoort & Benders (1996). Respondents were asked to rate each item on a 3-point scale: team is responsible, team is partly responsible, team manager only is responsible. 6) To measure whether the goals of the SDWT were achieved eight items were constructed. Items were based on the goals set by the organization at the start of the implementation phase. Respondents were asked to rate every item for two time intervals: 1995 and May 1997. Four-point rating scales were used.

Data collection procedures. Questionnaires were mailed together with a letter to inform team members about the goals of the study and to assure them entire anonymity. One week after the mailing a reminder followed through e-mail.

Results

Response rate. Questionnaires were mailed to 116 team members of nine teams. In total 63 team members returned their questionnaire. Because of the acceptable response rate (56%) no additional investigation of the non-response was scheduled. The response rate per team varied between 4 to 11 returned questionnaires, while the average size of a team is 12 team members.

Characteristics of team members. A striking feature of this land register office is the employees' seniority. The majority of the respondents (78%) works 20 years or longer at the land register office and 80% of the respondents is older than 40 years.

Information about the concept of SDWT. At the start of the formation of the teams team members were informed about various aspects of the forthcoming implementation of the SDWT. Information was provided through group meetings. In the survey nine items focused on nine different subjects that are related with the implementation of SDWT. For every item respondents were asked how well they were informed about it before the teams were established. The results are displayed in Table 1. As the mean scores show respondents received sufficient information. An exception are the information about the tasks the respondent own team will be responsible for and the shift in working hours in order to expand time to serve clients. Investigated is whether the degree of information varies between teams. The results of the oneway analyses with team as independent variable are displayed as well in Table 1.

For five of the nine subjects differences exist with regard to the degree of information ($p < .05$). Further with the use of the t-test differences between the two clusters were investigated. As was mentioned above in the section organizational context, the nine teams are divided into two clusters. Results of the t-tests show that for 6 subjects there existed differences that are statistically significant ($p < .05$). The mean scores for both clusters revealed that respondents from the cluster BJZV were much more informed than the respondents of the cluster LLZ.

Table 1. Team members' knowledge regarding various subjects related with the implementation of SDWT and differences between teams and clusters

			differences between the nine teams		*differences between the two clusters*		
subject	*Mean*[1]	*sd*	*F value*	*p*	*t-value*	*df*	*p*
1 concept of SDWT	2.58	.74	1.81	.10	1.38	58	.17
2 causes for SDWT	2.61	.87	2.66	.02	3.62	56.94	.00
3 responsibility members	2.70	.84	1.32	.26	1.79	57	.08
4 tasks of the team	2.35	.80	3.13	.01	2.73	58	.01
5 changes in job content	2.72	.74	2.48	.02	3.60	58	.00
6 training for new tasks	2.53	.82	2.93	.01	3.65	57	.00
7 cooperation in team	2.62	.79	1.93	.08	3.37	56	.00
8 shift in working hours	2.23	.87	4.71	.00	5.88	58	.00
9 role team manager	2.72	.78	.35	.94	1.38	58	.17

[1] items were rated on a 4-point scale. A higher score indicates more knowledge

Problems during the implementation. With regard to the problems that occurred in the year that the teams were established (1995), four problems were prominent. These were: the cooperation within the team (rated by 26 respondents); how to cope with conflicts (rated by 23 respondents); to find out what exactly are the tasks the team is responsible for (rated by 21 respondents); the daily prosecution of the tasks (rated by 20 respondents). Respondents were asked to rate the same list of problems for the moment the questionnaire was mailed (May 1997). A comparison of both time intervals show a considerably reduction of problems. The problem mentioned most frequently concerns the cooperation with in the team (rated by 14 respondents). Further, respondents were asked for every problem the perceived at both time intervals to indicate what activities were undertaken to solve the problems. Answers show that respondents most frequently discusses problems with their team manager or their team members. Assistance of the HRM department or the use of training was hardly mentioned as a mean to solve the problem.

Degree of self-directedness. To measure the current degree of self-directedness of the teams respondents were asked to rate 15 items focusing on performing traditional managerial tasks. In Table 2 the mean scores of these items are displayed together with the results of the oneway analysis (with the nine teams as independent variable) and with the outcomes of the t-tests (with the two clusters as independent variable).

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As the means of these items indicate team managers still perform managerial tasks. The organizational intention to make team members more responsible for managerial tasks is only partially realized. Respondents view they have more responsibilities regarding operational managerial tasks. For strategic managerial tasks such as the team financial budget, the selection of new team members, controlling the output level, and decisions regarding training respondents experience no responsibility at all.

Further, there exists differences between the teams but the differences between the two clusters are more considerable. Observation of the mean scores of both clusters show that, with a single exception, respondents of the cluster BVJZ are more involved in the prosecution of traditionally managerial tasks.

Table 2. Mean scores and differences between teams and clusters with regard to the responsibility of managerial tasks

			differences between the nine teams		*differences between the two clusters*		
task	*Mean*[1]	*sd*	*F value*	*p*	*t-value*	*df*	*p*
1 prosecution daily work	1.38	.52	2.74	.01	4.40	56.58	.00
2 arranging meetings whole team	1.42	.53	1.66	.13	1.92	57	.06
3 permission leave/holiday	1.63	.80	5.90	.00	one sample has no variance		
4 arranging temporary personnel	1.75	.77	2.51	.02	5.00	57.76	.00
5 selection new members	2.60	.62	1.92	.08	2.88	34.78	.01
6 mentoring new employees	1.49	.65	.73	.67	1.79	57	.08
7 checking work	1.57	.68	.49	86	.03	56	97
8 quality control	1.93	.81	1.59	.15	3.03	56	00
9 output level	2.58	.65	.99	46	1.13	57	.26
10 clients' problems	1.92	.65	1.70	.12	3.10	57	.00
11 repair of mistakes	1.53	.54	1.37	.23	2.66	57	.01
12 improvement work	1.67	.58	1.60	.15	2.62	55	.01
13 solving conflicts	2.07	.58	2.64	.02	3.24	57	.00
14 training decisions	2.71	.49	1.80	.10	1.29	57	20
15 budgeting	2.91	.29	.65	.73	.07	55	95

[1] Items were rated on a 3-point scale. Higher score indicates more responsibility for the team manager

Achievement of the goals. At the start of the formation of teams goals were formulated to be achieved by the implementation of the SDWT. These goals are listed in Table 3. In the survey respondents were invited to rate to what extend these goals were realized at the start of the teams in 1995 and at the time of the survey (May 1997).

These goals are divided into two groups. The first group consist of organizational goals, while the second group is identified as employee benefits. The first four rows in Table 3 display the organizational goals. As the mean scores and the results of the t-tests indicate teams succeed to improve their performance with regard to meeting clients' orders, accomplishing the intended output level and scheduling work on a weekly basis. With regard to the fourth aspect, scheduling work tasks on a monthly basis, this is hardly performed adequately by the team members in 1995 and this continues to be unsatisfactory in 1997. The last four rows in Table 3 display the intended employee benefits of the implementation of the SDWT. As the mean scores show the understanding of the work processes and the work satisfaction were already high at the start of the teams and they increased further. For the other two employee benefits, job rotation and job enrichment, the data suggests no improvement or even a small decrease. Thus job rotation and job enrichment were no common practice in 1995 and two years later they are still hardly applied.

Further, investigation took place of differences between teams and clusters with regard to the achievement of the goals. Again the differences between the two clusters are more considerable than the differences between teams. Because of the limited space the F values and probability levels will not be displayed but the results show that the two clusters differ significantly with regard to the achievement of five goals (output level; weekly work schedules; job enrichment; job rotation within team; work satisfaction). The respondents of the cluster BJZV rated higher levels of achievement for the year 1997.

Table 3. Levels of achievement implementation goals in 1995 and 1997

	1995		*1997*		*differences between the two time intervals*		
goals	*Mean*[1)]	*sd*	*Mean*[1)]	*sd*	*t-value*	*df*	*p*
meeting clients' orders	2.60	.65	3.09	.60	-4.33	44	.00
meeting output volume	2.66	.73	3.00	.78	-2.06	40	.05
weekly work schedules	2.45	.83	2.86	1.02	-3.12	50	.00
monthly work schedules	1.72	.61	2.20	.94	-3.65	49	.00
understanding processes	2.72	.77	2.85	.69	-.88	52	.38
job enrichment	2.53	.80	2.36	.86	1.20	52	.24
job rotation within team	2.21	.85	2.27	.84	-.48	51	.64
work satisfaction	2.60	.95	3.09	.77	-3.60	52	.00

[1)] Items were rated on a 4-point scale. A higher score indicates a higher degree of realization

Conclusions

In this organization teams are established in 1995 with the expectation that these teams will be transformed into autonomous self-directed work teams at the end of 1996. To evaluate whether this is realized a study was set up in 1997 to investigate the results of the establishment of the teams. Due to the limited space in this paper attention is only paid to the results of the survey among team members. It is noteworthy to mention that the other two methods used in this study (questionnaire for team managers and cluster managers, and interviews with key-persons) confirmed more or less the results of the survey among team members.

Degree of implementation. The first question focused on the degree of implementation of the concept of SDWT. For a successful implementation it is required that participants are informed about the

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forthcoming changes. The data indicate that team members received sufficient information. Teams belonging to cluster BJZV received more information than the teams of the cluster LLZ. To assess further the degree of implementation the current division of responsibilities for traditionally managerial tasks was investigated. For the majority of tasks team members are responsible or have some responsibility. Tasks they do not perform can be characterized as strategic managerial tasks belonging to the core of the traditional manager function, such as budget and training issues. Between teams there exist differences with regard to the degree team members are responsible. But more significantly are the differences between the two clusters. In the cluster BJZV team members have more responsibility for managerial tasks.

Problems occurring during implementation. The second research question focuses on the problems teams have to overcome. As the results indicate four problems were prominent in 1995 at the start of the teams. In 1997 these problems were much less prominent and no new problems occurred. Remarkable is that when problems occur teams have a strong preference to solve these themselves. Problems are discussed with colleagues or with the own team manager. More professional help to overcome problems, like training or assistance of the HRM department are hardly used.

Achievement of the goals. In total eight goals were set by the organization. Four of these can be characterized as organizational goals: meeting clients' orders; meeting production volume; teams are able to schedule work on weekly basis; teams are able to schedule work on a monthly basis. As the results of the study indicate the first three goals are more or less achieved in 1997. The latter goal is not realized. Further the establishment of teams was perceived as a tool to increase the quality of work and to impact employees' work involvement. The data show that employees experience nowadays more understanding of the work processes and they have a high level of work satisfaction. More structural organizational changes to increase the work quality, like job rotation and job enrichment are hardly applied. Thus, taken into account the goals, the establishment of teams may only be perceived as partly successful. In this respect the levels of achievement are higher in the teams belonging to the cluster BJZV.

Differences between the two clusters. The results of the survey reveal that there exist differences between teams with regard to the degree of information prior to the establishment of the teams, the responsibilty of team members for managerial tasks and the level of achievement of the implementation goals. More significant than differences between teams are the differences between the clusters whereto the teams belong. In general teams belonging to the cluster BJZV are better informed, bare more responsibility for managerial tasks and have higher levels of goal realization. There are several explanations for the differences between the two clusters. The most obvious explanation is that teams belonging to the BJZV cluster have team managers and a cluster manager with positive attitudes toward the SDWT. A second explanation might be that the work activities of the three BJZV- teams are easier to organize in teams.

Contribution of the HRD department. The last question focuses on the role of the HRD department in the process of implementation. In this organization there is no separate HRD department but this is integrated in the small HRM department. This department plays no significant role in the process. This is partially explained by the team members preference to solve their own problems and they ask hardly no assistance of the HRM department. On the other hand it is unsure how active the HRM departments was in offering help to teams and team managers.

Explanations and recommendations. Our conclusion is that the idea of SDWT is partially implemented in this organization. Crucial aspects of the concept of SDWT are not present in the teams, such as job rotation, job enrichment, and the prosecution of management tasks by team members that belong to the core tasks of the manager. In terms of Amelsvoort & Scholtens (1994) the teams can be defined as 'groups' and only when all managerial tasks are performed by team members these groups become self-directed work teams. It is not uncommon that SDWT are not implemented entirely since the allocation of managerial tasks to team members seems to be a frequent problem (Amelsvoort & Benders, 1996). The main question is what should be done to transform these groups into SDWT. It is likely that the key for further progress lies in the roles and attitudes of team managers and cluster managers. Therefore, it is important in the yearly assessment of team managers to focus on their contribution to the process of their SDWT. In our view the need for training and guidance for team members to master the more strategic core managerial tasks and for team managers to become coaches is present. Further we believe that team managers can learn from each other since the data indicates that in one cluster (BJZV) the implementation was more successfully than in the cluster LLZ.

Limitations of the study. A major problem is the lack of clear concepts and scales to measure team characteristics and to assess the developmental stage of teams. Further on a conceptual level it is not clear what should be the role and activities for the HRD department to assist organizations in their attempts to establish SDWT. A limitation specific for this study was the choice to ask respondents to assess the situation in 1995, while the survey was held in 1997. Although we are aware that recalling information may cause some bias in the results, there were no other alternatives to gain insight in important team characteristics in their first year of existence.

References

Amelsvoort, P. & G. Scholtes (1994). *Zelfsturende teams, ontwerpen, invoeren en begeleiden. (self-directed teams, design, implementation and coaching).* Oss: ST-groep.

Amelsvoort, P. & Benders, J. (1996). Team Time: a model for developing self-directed work teams. *International Joyurnal of Operations & Production Management,* 16, 2, pp. 159-170.

Fischer, K. (1993). *Leading self-directed work teams: a guide to develope new teamleadership skills.* New York: McGraw-Hill.

Luer, M. & P.D. Palleschi (1994). Self-directed work team development. *Human Resources Management & Development Handbook,* pp. 866-875. New York: Amacon.

Overdijk, C. (1996). Baas in eigen team (boss in your own team). *PW,* (20),2, pp. 12-15.

Ray, D. & H. Bronstein (1995). *Teaming up: making the transition to a self-directed team-based organization.* New York: McGraw-Hill.

Ter Horst, H. (1997a). *Ontwerp en implementatie van zelfsturende teams (design and implementation of self-directed work teams).* Literatuurscriptie (review of literature). Enschede: Universiteit Twente.

Ter Horst, H. (1997b). *Implementatie en effecten van taakgroepen (implementation and effects of teams).* Enschede: Universiteit Twente.

Wellins, R.S. & J. George (1991). De sleutel tot zelfsturende teams (the key to self-directed teams). *HRM-select,* (3),3, pp. 69-81.

Wellins, R.S., Byham, W.C. & J.M. Wilson (1991). *Empowered teams: creating self-directed work groups that improve quality, productivity and participation.* San Francisco: Jossey-Bass Publishers.

Mature Self-Directed Work Teams: An Investigation into Training and Development

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The purpose of this research was to identify and analyze the training received by mature self-directed work teams in manufacturing environments. Questionnaires and interviews were used to collect data from management and teams in companies throughout the United States. The findings suggest that management is supportive of team training; works to identify team training needs; and that training is offered close to its implementation. However, the training does not always support continued team growth and self-direction.

"Two realities are shaping organizational life in American today. The first reality is that all organizations are faced with the same primary challenge: they will either produce consistently superior services and products, or they will soon not be producing much at all. The second reality is that superior teamwork and developing superior work teams have been demonstrated to be the only consistent strategies for producing superior services and products. The evidence is now quite unequivocal. Teams and teamwork make the competitive difference" (Kinlaw, 1991, p. xiii).

This study concentrated on examining training, management's support of training and a team's involvement in training for the mature self-directed work team. A mature self-directed work team was defined as a group of persons who have been empowered with decision making responsibilities and authority. Wellins, Byham, and Dixon (1994) described a mature team as a team that has matured in terms of "...sophistication, confidence, skills and areas of responsibility... At the mature team level, the team and its members [take]a larger view of responsibility – often involving suppliers and customers. Member also are involved with cross-functional process improvement and reengineering teams" (p. 15).

Because of the managerial nature of some of these responsibilities, team members need to be given the opportunity to develop new skills and new ways of working. Vogt and Murrell (1990, p.94) state that organizations must "...recognize that development means education and learning; and they [must]conduct training programs that recognize the personal, organizational, and task needs of the system."" Initially, "team members need training in work-team awareness, technical skills, interpersonal, problem-solving and administrative procedures" (Orsburn, Moran, Musselwhite, and Zenger, 1990, p. 271). But what about after the team has worked together for more than a year and has been given additional responsibilities? Is team awareness training still necessary? Should interpersonal skills training be revisited? What training is required once a team reaches a mature level of self-direction?

To provide more information of the needs of mature teams this study examined the following research questions:

1. What areas of training are required by teams to support their continued growth and acceptance of responsibilities?
2. Are mature self-directed work teams receiving the type of training necessary to provide continued growth and acceptance of responsibilities?

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3. How do teams rate themselves in various skills and how does the training they receive support the ratings?
4. What part do management and teams play in identifying the training needs of the teams?
5. What is management's support of the self-directed work team and training for the self-directed work team?
6. Do teams see training as an integral part of their regular activities?

Methods

Research Participants Two hundred twenty-five manufacturing companies were randomly selected from the over 300 manufacturing companies listed in the 1990 Fortune 500 companies. In addition, 50 New Mexico companies were randomly selected from a listing of New Mexico manufacturers. An additional 25 manufacturing companies were selected for their noted success in working with teams from the literature. Of the 300 companies surveyed, 74 companies responded for a 25% response rate. Of the 74 companies responding, 25 had mature self-directed work teams operating at one of the levels of self-direction defined in the questionnaires. The remaining 49 companies either had no self-directed work teams, were in the start-up phase of team development, or declined to participate in the research. Twenty-eight Team Questionnaires were returned representing 23 companies and 14 Management Questionnaires were returned representing 14 companies.

Research Instruments Two questionnaires - one for the work team and one for management - were developed. Questions addressed mature team training, a team's participation in its training, and management's support of team training. Three demographic questions were included that identified the level of team self-direction, the number of years at this level and the size of the team. Questions were either Likert scale or multiple choice.

Procedure A research package was sent to the director of training or human resources at each of the companies. Each package contained a cover letter, a Management Questionnaire with return envelope, and two Team Questionnaires with return envelopes. The criteria for participating in the research was stated in the cover letter to the director. Companies were asked to participate only if they met the following criteria: they were a manufacturing company; they had self-directed teams that were empowered with decision-making responsibilities and authority; and these teams had existed for at least one year.

For companies that met the criteria, the director was asked to distribute the Management Questionnaire to a management team and the Team Questionnaire to two self-directed work teams that had been working together for at least one year..

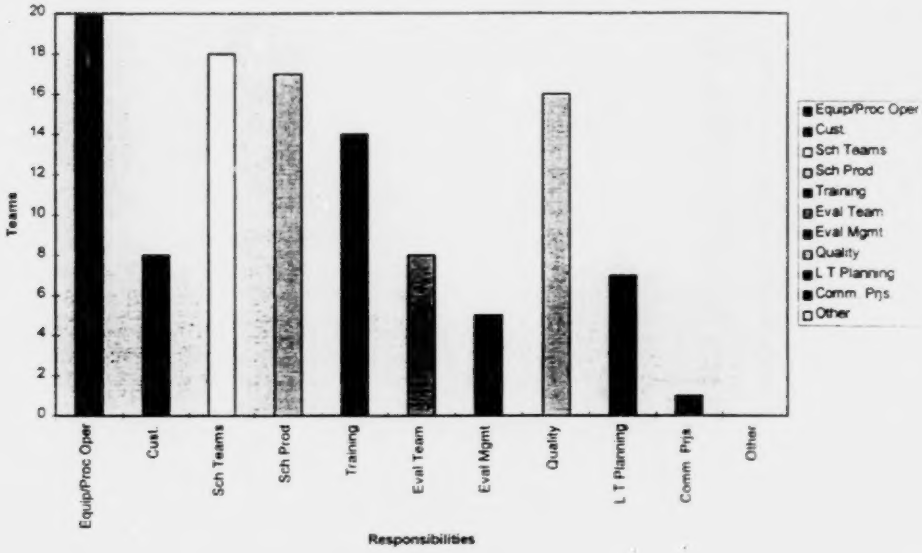
Results

Research Question 1. *What areas of training are required by teams to support their continued growth and acceptance of responsibilities?* It is obvious from the research that team responsibilities do continue to increase. From the questionnaires, 88% of the teams, and 77% of management indicated an increase in team responsibilities during the past year. Increased responsibility was primarily in the following five areas: equipment/process operations, scheduling of team activities, scheduling production activities, quality assurance/quality control projects, and training. See Figure 1. Each of these five responsibilities have been given to over 50% of the teams. Two other areas, dealing with customers and evaluation of team/team members, were each new responsibilities for 30% of the teams.

The Management Questionnaire asked, "To what do you [management] attribute the teams' ability to accept more responsibility? The primary factors that enable teams to take on new responsibilities are the "team's training" and the "willingness of management to take chances."

Other reasons include the teams' "total knowledge of process and responsibility" and "management's willingness to involve them and engage them in more of the business."

Figure 1: Added team responsibilities during the past year



Research Question 2. *Are mature self-directed work teams receiving the type of training necessary to provide continued growth and acceptance of responsibilities*? This study found team training to vary from company to company, team to team. The differences were due to a variety of factors, such as management support, corporate philosophy, team responsibilities and team maturity.

Ninety-three percent of the teams responding to the questionnaire had received at least one training course during the past year. Forty-four percent had received 10 classes or more, with the most number of courses for any one team being 22. A correlation coefficient was calculated for the relationship between the number of course and level of self-direction. Sixty-seven percent of the teams identified at least one training class as needed, but not being received. Two teams indicated no training being received and none being needed; however, their final comments implied a problem existed. One team member summed it up by stating, "As you can see from this survey, we need more training." In a follow-up interview, a team member stated, "We haven't really been trained very well. When we were formed, we didn't get any training, and we still don't."

Training most frequently received in the past year included: teambuilding, conflict resolution, managing diversity, giving/receiving feedback, problem-solving, statistical process control, mechanical skills, computer skills, and quality management. One skill, teambuilding, was received by more than 50% of the teams responding. The remaining topics had been received by less than 50% of the teams. Three of the companies interviewed stated that most of the training had been completed by the majority of teams prior to the last year. The literature showed that most teams receive team and interpersonal skills training during their first year. Subsequent training is directed toward improvement of team skills, technical skills, and training for new responsibilities.

When asked to identify the areas of *training needed, but not being received,* teams identified "Managing Change" and "Managing Stress" with the most frequency. Managing

Change was identified by 25% of the teams, and Managing Stress by 19%. Need for this training was further supported in the follow-up interviews.

In addition to the current training and the needed training, teams were asked to identify the *most useful* training received. In an interview with a manufacturing team, the members identified "Managing Stress" as on e of the most important courses they had received. In the questionnaires fourteen different topics were indicated by the 16 teams responding to the question. Six responses were in the area of team and interpersonal skills and eight under management skills. The areas are problem-solving/flowcharting, Meyers Briggs, building trust, decision making, Zenger-Miller's working program, self-motivation, effective meetings, giving/receiving feedback, statistical process control, teambuilding/team effectiveness, managing change, and conflict resolution.

Management was asked to identify the most important areas of training for the mature self-directed work team. Fifty percent indicated communication skills. Management identified interpersonal skills as a lessor strength of teams.

Teams were asked to identify their strengths and weaknesses. Two major team strengths identified by the majority of the teams were productivity and team camaraderie. Three less strengths were lack of support from management, lack of training for all required tasks/responsibilities, and lack of participation by all team members. The two major strengths were supported by over 74% of the teams, whereas all of the lessor strengths were identified by less than 30% of the teams.

Management was also asked to identify the strengths of self-directed work teams. Ninety-three percent of management support the team responses by identifying *better productivity* as a major team strength. Other team strengths indicated by more than 50% of management were better working environment, better understanding of each other's needs, increased exchange of ideas/knowledge, and commitment to the organization. The lesser strengths of self-directed work teams as seen by management were primarily interpersonal problems (50%) and trying to take on too much too soon (43%).

The results from the questionnaires and follow-up interviews show that the majority of self-directed work teams have received *some* training during the past year. However, this training *less than often*, supported continued growth and acceptance of new responsibilities. More than 60% of the teams needed training that was not being given.

Research Question 3. *How do self-directed work teams rate themselves in various skills and how does the training they receive support the ratings?* Teams and managers were asked to rate the teams in the following skills - technical, work habits, interpersonal, communication, managerial, productivity and quality assurance. Teams rated themselves highest in the areas of productivity and quality assurance. Management supported the teams' high rating of productivity. Ninety-two percent of managers' responses identified better productivity as a major strength of self-directed work teams and 85% identified increased productivity as a benefit. The lowest team skills rating was given to managerial skills and communication. These areas were rated as lesser strengths of work teams by 50% of management.

For at least 33% of the teams, the past year's training supported productivity and quality assurance. Statistical process control was received by at least 50% of the teams. Problem-solving and quality management were received by 33%. Technical skills training had been received by 93% of the teams surveyed. This training was accomplished through on-the-job instruction by other team members.

The low rating in managerial skills is supported by the lack of training in supervisory skills, leadership skills, time management, project management, report writing and needs assessment. Training in these areas was received by less that 15% of the teams during the past year.

After rating their skills in the seven areas, teams were asked "What is being done to improve upon any of these skills?" The responses showed that 74% of the teams were "working to solve some of its problems." Forty-one percent indicated that "training in problem areas is being provided." Companies with highly supportive management were found to work directly with the teams in helping them solve problems they were unable to solve themselves.

In summary, the average rating for all skills, except managerial and communication, was good or better. Technical training is mainly being supported through on-the-job training by team members. Work habits are reinforced through team norms and codes of conduct. Interpersonal and communication skills, are found to be a continuous problem among teams and are being dealt with by the teams with management's support upon request. Managerial skills are not being supported with training. Productivity and quality assurance have the highest rating and are strongly supported with training in SPC and quality management.

***Research Question 4**. What part do management and teams play in identifying the training needs of the teams?* At maturity, it is important that teams become involved in identifying their own training needs. This responsibility provides teams with the ability to address problems as they see them and to build on the skills and knowledge of the team members. A mature team should know what it needs and when it needs it.

Teams indicated that 88% of them were responsible to identifying their own training needs. This was contradicted by management's' responses, where only 14% of management saw teams as solely responsible and 21% saw management as solely responsible. The remaining 65% found this responsibility to be shared by at least two sources, primarily, the team and management. Other sources were the training department, human resources and individual team members.

Team responses showed that teams identify their own training needs primarily through "requests by one or more team members." Other methods that are used include "recurring team problems", "team evaluations" and "recurring process problems." Forty-three percent of the teams use more than one method.

Questionnaire responses indicate that the responsibility of identifying team training needs is shared between management and the teams even though teams see it differently. Management normally requires everyone to receive the basics. Additional training is mostly voluntary and determined by the teams with some guidance from management. Specific training is usually requested by teams or a team member.

***Research Question 5**. What is management's support of the self-directed work team and training for the self-directed work team?* A review of the literature identified the importance of management's support for the self-directed work team and for providing the necessary training. In order for teams to reach any level of self-direction, management must openly support the concept and provide the training necessary for teams to mature. On questions which asked if management is supportive of training and supportive of the self-directed team concept, both management and teams rated management's support as being *often*. Teams were asked to identify management's behavior toward team efforts. At least 50% of the teams see management's most supportive behavior as "support of training and training requests," "backing of team decisions," "open communication," and "encouraging total involvement." None of the management responded that they had "no involvement" in team training.

***Research Question 6**. Do teams see training as an integral part of their regular activities?* In order for teams to mature and accept new responsibilities, training is needed. Under the self-directed concept, continued growth is a goal with training as a means for achieving this goal. Management and teams were asked to rate the frequency as to whether "training is an integral part of the teams' regular activities." Thirty-three percent of the teams and 21% of management rated this statement *Never* or *Sometimes*. These results indicate that management, more than the work teams, see training as an integral part of the teams' regular activities.

Discussion

The main purpose of this research was to identify and analyze the training received by mature self-directed work teams in a manufacturing environment. In addition, the research sought to identify the teams' involvement in identifying their own training, and management's support and involvement in team training.

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Recommendations This research has found various practices that support mature self-directed work teams. It has also identified areas for improvement in training, identifying and scheduling of training, and management support. Established was the fact that mature self-directed work teams do continue to accept new responsibilities and are receiving some training. However, the training being received is not always what the team needs. When comparing responsibilities against training, the research identified a few discrepancies.

Many of the responsibilities being given to mature self-directed work teams require managerial skills, such as scheduling, reporting, and evaluation. The research found a minimum of training directed toward these tasks. In addition, teams indicated that their managerial skills needed improvement. Team evaluations need to assess the managerial skills of the teams and management needs to provide training to support these skills.

During the past year over 50% of the participating teams gained responsibilities in the areas of equipment/process operations and quality control projects. Thirty percent began working with customers. These responsibilities can be greatly enhanced with a broad knowledge of business concepts. To be more effective in these areas, teams need training in the following areas (Wellins, 1994, p. 340; Christison, 1994, p. 47):

- the range of the company's process, products and services;
- the process flow and the links between one's own team and other teams;
- dealing with customers and identifying customer needs;
- financial performance and the link between finance and operations; and
- quality concepts and application of quality tools.

Training in business concepts will provide teams with a better understanding of how their work affects the business inside and outside the company. It also provides job flexibility and provides teams with the tools to make sound decisions.

The added responsibility of dealing with external customers creates a need for team members to sharpen their communication skills. Teams should revisit communications training where they can practice these skills with people outside the company. Such training would help improve the overall communication skills of the teams, improving communication inside the company.

Another valuable area of training for mature self-directed work teams is "train-the-trainer." The research found that the majority of teams do train new members and cross-train each other on the technical skills require of the job. However, less than 15% of the companies were found to offer any training dedicated toward teaching team members effective training techniques. Train-the-trainer courses would make team member training more effective.

This study identified interpersonal skills as a continual problem with self-directed work teams. As teams continue to take on responsibilities, problems become harder to solve leading to interpersonal problems among members (Kaeter, 1994). However, putting teams back in the classroom is not the solution. The research found, that overall, teams prefer to solve their own interpersonal problems; but when solutions are out of their reach, they need management to facilitate. Mature teams prefer to solve interpersonal problems as quickly and as quietly as possible. Once teams become self-directing, interpersonal skills training should be provided immediately upon request and should deal directly with the current problem. Participation in the training should be determined by the team. Some teams were found to deal with such issues as a team while others preferred to involve only those members directly affected.

Other areas of training that were identified as being needed by teams were managing change and stress. Such training is needed to help teams deal with the changes in team membership, team responsibilities and accountabilities, and changes in the organizational structure.

The research found that the responsibility for identifying the training needs of mature teams is shared between management and the teams. The literature supports team ownership of this responsibility. Organizations thrive when teams take responsibility for their own learning and take ownership of identifying their own training needs (Bennett and O'Brien, 1994). However, until teams become proficient in evaluating their skills and identifying areas that need improvement, they will need management support. Therefore, for a team to become totally self-directed in identifying its own training needs, management must provide training for effective self-assessments. Companies with mature self-directed work teams were found to have a supportive management.

Recommendations for further study Of the 74 companies responding to the research, only 23 had mature self-directed work teams. There is little known about the needs and practices of mature self-directed work teams. In was not until 1993 that the research began describing mature teams. Most of the research deals with start-up teams and the establishing of work teams. Research should continue to study the evolution of these teams. Studies in any of the following areas would be beneficial in helping organizations maintain successful work teams:

- training for full accountability of work teams;
- middle management in the self-directed environment;
- team and team member evaluation and skill assessment;
- responsibilities of the mature work team; and
- effectiveness of the self-directed work team.

Summary Training is a tool that is used by self-directed work teams to make improvements and to prepare them for new responsibilities. Identifying training needs is the responsibility of the mature team. Providing the resources for training is the responsibility of management. Training for the mature self-directed work team needs to be more focused toward preparing teams to accept new responsibilities and allowing teams to make improvements. Management should evaluate its training programs to ensure that the resources spent on team training support team growth. Companies with mature self-directed work teams must establish and maintain an environment where training is a component of its continuous improvement process and is integrated into the culture of the organization.

References

Bennett, J.K., O'Brien, M.J. (1994, June). The building blocks of the learning organization. Training, pp. 41- 49.

Christison, W. (1994, July). Financial information is key to empowerment. Quality Progress, pp. 47- 48.

Kaeter, M. (1994, April). Repotting mature work teams. Training, pp. 4 -6.

Kinlaw, D. (1991). Developing Superior Work Teams. California: University Associates.

Orsburn, J., Moran, L., Musselwhite, E., Zenger, J. (1990). Self-directed Work Teams. Illinois: Business One, Irwin.

Vogt, J., and Murrell, K. (1990). Empowerment in Organizations. California: Pfeiffer.

Wellins, R., Byham, W., and Dixon, G. (1994). Inside Teams. California: Jossey-Bass.

Appendix

Participating Companies

Aeroject
Air Products/Chemicals
Amdahl Corporation
American Honda
American Home Products
Ampex
Amtech Systems Corp.
Applied Material
John Deere
Key Tronic Corp.
La-z-boy Chair Co,
Laguna Industries
LSI Logic Corporation
Marshall & Ilsley Corp.
Masco Corp.
Maytag/Admiral Products

AT&T Manufacturing
Ball Corporation
Bausch & Lomb
Bell Group
Brown Forman Corp.
Campbell Soup
Coca-Cola/Dr. Pepper
Coors Brewing
Crestline Plastics, Inc.
Detroit Diesel
Dr. Pepper/7-Up
Duracell Int'l.
Ethicon Endo-Surgery
Farmland Industries
Fleetword Enterprises
Ford Motor Company
General Mills, Inc.
Gold Kist Inc.
Harris Semiconductor
Hart Schaffner & Marx
Heinz
Hillenbrand
Honda of American Mfg.
Honeywell Defense
Hormel Foods
Jaguar Precision
Micron
Milliken
Mobil
Ocean Spray
OTC
Paccar
Pfahler Mfg.
Pfizer-Food Science
Pharmacia
Precision Computer System
Raytheon Co.
Reynolds Aluminum
Rubbermaid
SC Johnson Wax
Scheaing Plough Corp.
SCJ Ploymer-Resins
Silicon Graphics
Snap-On
Sunbeam-Oster
Teledyne Ryan
Tyco Toys, Inc.
Westinghouse
Westinghouse Test
Xynatech
Zytec

Improving learning networks.
No 'one best way' for developing learning systems in organizations

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This paper focuses on differences and dynamics in organizing and improving learning systems. Actors such as managers and workers play an important role in improving learning systems. We will discuss our findings from two learning system development projects, -Water and Bridge- by focusing on the actions and strategies of different actors in the learning system.

What is the best way to organize learning systems for employees in corporations? Learning systems can be organized and developed in several ways and in several directions. Actors -such as individual and groups of employees, HRD-professionals and managers- play an important role in organizing and improving learning systems. These actors can have different views (learning action theory) on what direction the learning system should develop, as is shown in the following example:

> In a Dutch consultant organization, the consultants and their managers agreed on using a new test 'x' in the consultancy practice. In orde to be able to use the new test and interpret the results in a professionally correct manner, the consultants want to follow a course especially developed for this test by their professional field. The learning director however, thinks that an internal trajectory in which the consultants themselves discover how to use and interpret the test will be sufficient.

We see that a new learning trajectory needs to be developed in order to use test 'x'. But what learning trajectory would be best? The learning director and the consultants differ in their views on what direction to organize the learning trajectory: an internal trajectory withoudt interference of the professional field, or an external trajectory. Apparently, there are different ways to organize learning systems in organizations and different directions in which learning systems can develop. We believe that organizing and developing learning systems can be seen as the results of actions of different actors within and around the organization. The learning-action theories and strategies of actors and their position in the learning network, play an important role in improving learning systems. Despite long term interest in the organization of learning systems, hardly no attention is paid to the actions of different actors in organizing and improving the learning system. In this paper we will focus on the actions of actors (called actor strategies) in developing learning systems in two organizations, based on the learning network theory (Van der Krogt, 1995).

Theoretical Framework

In literature several theoretical perspectives on the organization of learning systems can be found (see for example Van der Krogt, in press; Brinkerhof & Gill, 1994; Marsick & Watkins, 1993). In this paper we will use the learning network theory (Van der Krogt, 1995).

The learning network theory: developing learning networks in organizations

In the learning network theory (Van der Krogt, 1995), a network approach to organizing is applied to learning systems. This means that an organization is conceived of as a network of actors who undertake actions in interaction and thus shape the structure (Nohria, 1992; Baker, 1992).

Learning systems in organizations are also conceived of as a network of actors who undertake actions relevant to learning of workers. Learning networks are then viewed as a network of actors who undertake actions in three main processes of the learning network -learning policy, learning programmes and qualification- and so shape the structure.

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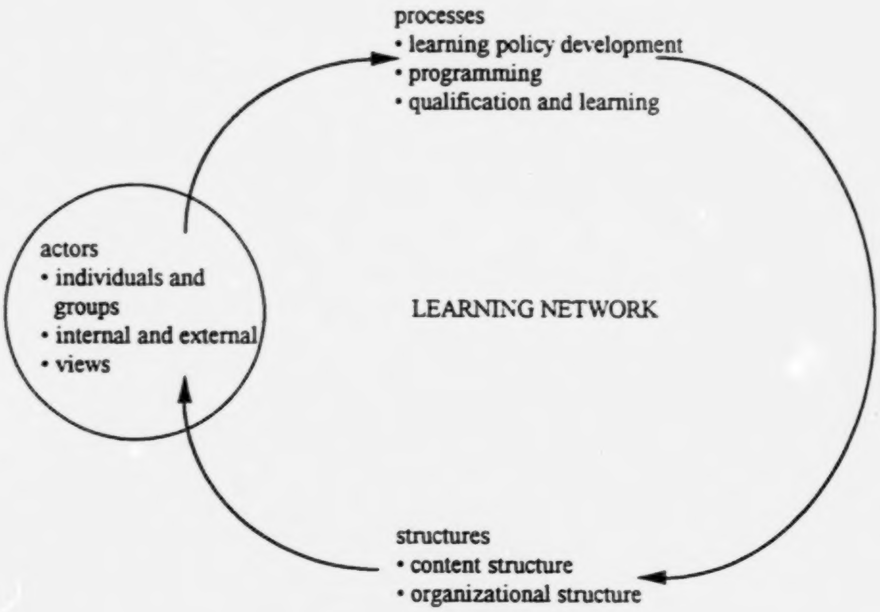
Learning networks and actors. Learning activities (and work activities) take place in *networks*, that is to say more or less durable structures of co-operation between actors within and around organizations, set up to tackle certain problems and achieve certain goals. The term *actor* should be understood in a broad sense (Brinkerhof & Gill, 1994). It is not only trainers and managers who serve as actors in learning networks, but other groups and organizations as well, including for instance training counsellors, course developers, middle managers, personnel department staff, foremen, buyers, suppliers and the employees, i.e. the learners themselves. Moreover, actors can come from within or outside the organization - think, for instance, of external training advisors and educational institutes. Every actor has its ideas and views on learning and will undertake actions according to these ideas and views. The learning action theories of actors can differ from each other. The learning activities of actors have their origin in the learning action theories and can also differ from other actors.

Figure 1: learning network with actors, processes and structures

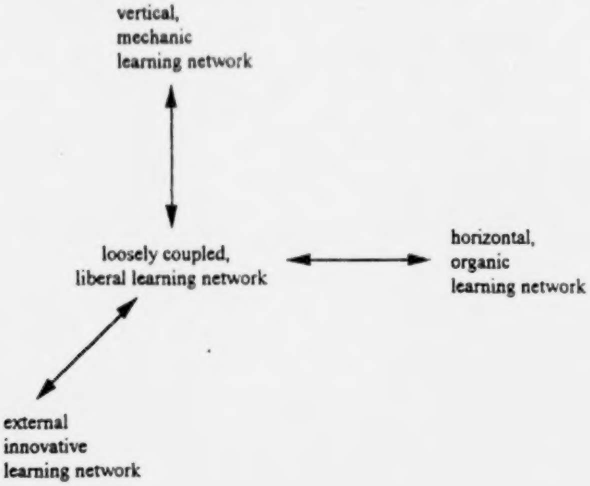


Learning networks: structure and processes. Learning networks have a certain *structure*. Firstly an organizational structure, that is to say a certain division of tasks, responsibilities and authority among the participating actors. In the organizational structure we also find the procedures that among others will specify which actors will be participating in which processes. Secondly the content structure, comprising the whole of the learning situations (formal and informal, on- and off-the-job) available to the actors in order to create learning programs. Learning networks also have a learning climate. That is to say the norms and values that are manifested into the structure and so give direction to the actions of the actors.

Within these structural context, the actors continually work together to shape the three *main processes* of the learning network: the design of learning policy, the development of learning programs and carrying out learning activities (qualification and learning).

Development space and dimensions. Learning networks are not static but constantly evolving structures of co-operation. The actors are important motors of the *development* of learning networks. They give new impulses to the learning processes in the learning network. As a consequence the learning network can develop into another direction (see also figure 2).

Figure 2: three-dimensional space for the analysis of learning networks, types of learning networks and development lines



Actors can develop learning networks in different directions, which can be visualized by means of a three-dimensional space, the three dimensions being:

- a *vertical dimension*, representing the extent to which the processes are steered from above, by management. A development of the learning network along this dimension implies a strengthening of hierarchical control by means of policy plans, formalized training programs and strict guidance of course participants. Taken to its extreme, verticalization can lead to a hierarchical, mechanically organized learning network.
- a *horizontal dimension*, representing the extent to which the processes in the learning networks are steered from below, by groups of members of the organization. A strengthening of this dimension implies a development of shared views on training and learning and an intensification of group co-operation on the programming and implementation of learning trajectories. Taken to its extreme, this dimension will create a horizontal, organically organized learning network.
- an *external dimension*, representing the extent to which the processes are steered from the outside, by external actors. Development along this dimension implies greater influence of organizations such as R&D institutes, trade organizations and training institutes on the development and implementation of learning programs. The extreme type on this dimension can be referred to as the external, innovative learning network.

In addition to the three above-mentioned development lines, a *fourth direction of development* can occur, namely the *'liberalization'* of the learning network. This development implies a weakening of the vertical, horizontal as well as external dimensions, giving the individuals greater freedom to develop learning trajectories and undertake learning activities independently, on the basis of their own views and needs. In its extreme form, the resulting learning network can be typified as a loosely coupled, liberal/individualist learning network.

Differences between learning networks. The three-dimensional space also allows us to take 'snapshots' of learning networks by determining their position along the three dimensions at any given time. An existing learning network in an organization will only rarely correspond with one of the four possible extreme types (and so be situated on the extreme end of one dimension); combining elements of all dimensions, it will generally be located at a certain point in the space in between the dimensions.

Actor-network-approach: improving learning networks.

Actor strategies and development of learning networks. Actors shape the learning processes and the structure of the learning network (see figure 1). This also opens possibilities to change and improve learning networks. Through their actions actors give new impulses to the learning network. Actors can give new impulses in various ways and also the learning network can evolve in different directions. This is what we call actor strategies: the whole of actions of an actor in one (or more) learning processes which can develop the learning network into a certain direction. All actors in a learning network have more or less explicated ideas and views in relation to improving learning networks. We believe that actors will try to change the learning network in directions according to their ideas and views. As starting point for change, actors can use different processes. Actors can try to influence the learning policy, actors can try to realize changes in the learning program but also in the qualification proces. We use the three-dimensional space to distinguish between several lines of development. That is to say, that the learning network can develop into a more or less vertical, horizontal or external direction. Most of the time the learning network will improve along a combination of development lines. So, in this way strategies of different actors can bring about changes in certain directions of the learning network.

Different actor strategies. Content and direction (and efficacy) of the strategies of the actors are related to:

- the learning action theories of actors
- the present structure of the learning network and the position of different actors. We presume that the position an actor holds in the learning network will strongly influence the content and direction of the strategy. Workers, for example, will more often be able to influence the qualification process, whereas education professionals will have more influence on the learning program.
- the strategies of other actors in the processes. Actors actively operate and interact in the learning network, and also differ in their actions.

We expect to find different strategies of actors in the three processes. The strategies are not only dependent on the conceptions of the actors themselves, but also on the context in which the actors interact. We believe that the present position of the learning network in the three dimensional space will be of great importance for the strategies of different actors.

Research questions and assumptions

The research is based on the following two main questions:
a) Is there a relationships between the position of actors in the learning network and the strategies of those actors, and b) are there differences between strategies of different actors. We expect that actors will use different strategies according to their position in the learning network. For example: in an external learning network actors will give impulses into a vertical, horizontal or liberal direction; in a liberal learning network, actors will use strategies that lead to a more vertical, external or horizontal learning network. We expect that actors such as managers, educators, workers will use divergent strategies. In this respect also the strategies of external actors, such as consultants are deemed to be important.

Based upon these two main questions the following specific research questions were answered in this study:
1. The first question refers to whether we can find differences between the two learning networks of Water and Bridge.

- in which respect do elements of the learning networks of Water and Bridge differ from each other?
- where can we position the learning networks of Water and Bridge in the three-dimensional space?

2. The second question refers to actor strategies.

- what actors play an active role in the learning network of Water and Bridge?
- what actions are undertaken by those actors en especially in which processes and in what direction in the three-dimensional space?
- can we find differences between strategies of different actors?

Design and research method

We have conducted an exploratory research on the basis of two learning-network development projects in two organizations: Water and Bridge. Both projects were analyzed and conducted by researchers of the Nijmegen university. On the data collected during the two projects we have conducted a secondary, comparative analysis.

a) Two learning network-development projects. In both organizations the learning network development project was executed according to the tradition of organization-development. This means that we have diagnosed the actual learning network and discussed the results of the diagnose with actors in the organization.

Diagnose actual learning network.

The information about the learning networks at Water and Bridge was collected using the following methods:

- analysis of documents, including annual reports and internal discussion papers;
- formal interviews with the board members and workers using topic lists based on the learning network theory. In every organisation interviews were held with ten respondents.;

This information was recorded in extensive reports which were then analysed on the basis of the different elements of the learning network theory. The aim of this analysis was to typify the learning networks, that is to say, to situate the networks in the three-dimensional space.

Feedback.

The results of these analyses were then discussed in the management. On the basis of these discussions we made agreements with the management on further actions in the organization. In Water the research results were discussed in a plenary meeting, whereas in Bridge the board members have extensively discussed the results. In both organizations further plans of action were developed on the basis of these discussions.

b) The secondary analysis. The roughly structured data and analysis results were used to answer the specific research questions with respect to the place of the learning network in the three dimensional space and the strategies of the different actors.

Results

In order to answer the above mentioned questions, we will first describe the learning networks of respectively Water and Bridge (see table 1 below), followed by the strategies of the different actors.

1 Learning networks of Water and Bridge;

Based on the document analysis and the interviews, the elements of the learning network are described. In the table below we have put together the elements of Water and Bridge in order to show the differences between the two learning networks.

Water emerged from a professional organization. In a professional organization the highly trained professionals execute their work according to the procedures and techniques developed by their vocational field and educated to the individual professionals. The initial education as well as the continuing professional education of the professionals is very important. In both educational programs the vocational field plays an important role. In Water, however, the learning network is strong in its initial education but very limited in its continuing professional education. After the initial training, the individual workers themselves take care of their continuing professional education. For this reason, we typify the learning network of Water as a rather **limited external learning network**. This, however, gives cause to many problems. The work of the approximately 30 consultants is changing rapidly. The tasks of the consultants are more broadened. The initial education is therefore shortcoming and the existing methods are not adequate anymore. Until now, the vocational field did not succeed in offering an adequate training. Also within the organization there is not a suitable learning program for the consultants. The individual consultants have the responsibility to develop their competencies and to educate themselves. This only happens on an incidental basis. In the three-dimensional space we situate the learning network of Water on the external dimension, but it is rather limited.

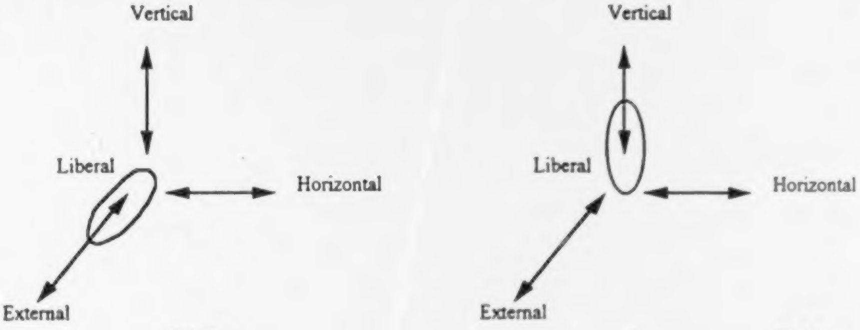
Table 1: Elements of the learning network in Water and Bridge.

	WATER **Limited, external learning network**	**BRIDGE** **Entrepreneurial, liberal learning network**
Actors	little learning actors	individual learning actors
- managers	.a member of management	.an active learning director
- training specialists (internal)	.none	.none
- workers		
.individual	.individual workers, passive	.entrepreneurial individual workers
.collective	.none	.none
- external actors	.professional field is passive	.individual external actors .an external training organization
Processes	few actions	especially individual learning and facilitate
-policy making	none	by learning director and management team
-learning programming	.internal few, .external, incidental by professional field	.stimulated by learning director .by individual actors, internal and external
-executing (learning)	incidental by workers	individual learning plans
Structures		
-content structure	incidental courses external	.courses internal .learning on the job
-organizational structure	not elaborated positions and procedures	.explicit roles and responsibilities .some procedures
-learning climate	.passive .not stimulating	.entrepreneurial .learning is important .individual responsibility

Bridge is founded by some creative and entrepreneurial psychologist, who wanted to bring into practice their ideas on education and development of individuals. In the past twenty years the ideas of the founders has been deepened and translated into training programmes and organizational consultancy projects. Bridge is now a blooming organization with about 75 trainers/consultants. The learning network of Bridge is still tuned to transfer the basic conception and to further develop it. The learning programmes for the trainers/consultants partly consist of courses on this subject. There is a lot of attention for learning on-the-job. The trainers/consultants use the evaluation data (offered by the clients on the basis of evaluation forms or feedback conversations) that they become on their work to reflect on their methods an try to improve them. In the learning network of Bridge the learning director is an important actor. He tries to give more structure to and at the same time broadens the learning program and the courses offered. He also tries to explicate the learning policy. However, the starting point for the individual workers is still that they are personally responsible for their own learning. We typify the learning network of Bridge as a *entrepreneurial, liberal one*. However, there are strong tendencies to steer the learning network more from the top by the management team (vertical tendency).

In the three dimensional space we situate Water and Bridge as follows:

Figure 3: learning networks of Water and Bridge in the three dimensional space.



Water **Bridge**

2 Action strategies of actors to improve the learning network.

Before the start of the learning network development project there was no learning policy in **Water**. Only on an incidental basis learning activities were undertaken by management and consultants. The project gave rise to the *board of directors* -with one member in a leading role- to reflect on the learning network. Therefore study meeting was organised, by the directors in co-operation with the researchers. In this meeting the researchers explained the research on the learning network of Water; further on the consultants discussed in small groups with members of the board of directors on the actual situation (of the learning network) and on a new learning policy. The board hoped through this meeting to strengthen the responsibility of the consultants for their own learning. The actions of the workers *(consultants)* were in this project limited. They explicated that they wanted more study facilities. Some of them expressed the importance of their vocational field. These limited actions in the learning policy process can be viewed as indications for a development in the external and individual dimension. A third group of actors are the *researchers*. Their actions in this project took place within the framework of the design of learning policy. They tried to stimulate the development of ideas on the learning network by the board members as well as the workers, and underlined the importance of systematically develop the learning network. They tried not to take an explicit point of view but to be neutral on the direction in which the learning network should be improved. It is important to notice that *other external actors* were not active in the learning network of Water.

In **Bridge** there was already a lot of attention for the learning network. Especially the *learning director* was systematically influencing the learning policy and learning programming. His actions can be viewed as a strengthening of the vertical dimension in the learning network. The board of directors wants to influence more strongly the learning of the trainers/consultants and to strengthen group learning processes. The research gave rise to discussions along the project with board members and with representatives of the trainers. The dominant action strategy of the *trainers/consultants* was focused on strengthening their own individual competencies. In that sense it fits in the actual entrepreneurial, liberal learning network. Some trainers/consultants explicate that they want to work and learn in groups. This refers to a strategy on the horizontal dimension. The *researchers* expressed in their interventions that the learning network of Bridge what rather limited in its one-faceted position on the liberal-vertical dimension of the learning network. A more multi-faceted learning network with more attention for the horizontal and external dimension would provide more opportunities for realizing innovations. It is interesting to notice that the *vocational field* is not an active actor in the learning network. However, clients put their stamp upon the learning activities of the consultants of Bridge through their evaluations.

Conclusions and perspectives

a) Differences in the learning networks of Water and Bridge

In the cases we studied, we found that the actual position of learning networks can be expressed in dimensions. Learning networks can be given a certain value on the different dimensions: individual-horizontal; individual-vertical; individual-external. The differences in the learning networks are then expressed in terms of the three-dimensional space. The learning network of *Water* is relatively low on the vertical and horizontal dimension and limited on the external dimension. The learning network of *Bridge* is -in comparison- relatively low on the horizontal and external dimension, but stronger on the liberal-vertical dimension. The three-dimensional space shows us that the learning network of Bridge and of Water differ. Not only theoretically, but also empirically, we can conclude that learning systems differ. The learning system of Water can be typified as a liberal, limited external learning system. The learning system of Bridge can be typified as a liberal, limited vertical learning system.

b) Different strategies in Water and Bridge.

Globally, we found indications for different strategies in Water and Bridge. In Water there is a global tendency towards individualization (liberalization) of the learning network, demonstrated by making the individual employees responsible for their own learning. In Bridge there is a global tendency towards more verticalization of the learning network, demonstrated by a hierarchilazing of the learning network (especially more steering from the top). Less noticeable in our cases is a global tendency toward greater horizontalization.

c) Actors have different strategies: processes and directions

Looking at the actions of different actors or group of actors, we can find indications for different strategies of actors or groups of actors. In **Water**, actors that were playing an active role in the learning network, were the board of directors, the workers and the researchers. The board of directors was active in the learning policy. Their strategies were considered as liberalization and verticalization (liberal-vertical dimension). The workers were along the project also active in the learning policy: their strategies were considered as externalization and liberalization (liberal-external dimension). In **Bridge**, actors that were playing an active role in the learning network, were the board members and especially the learning director, the workers and the researchers. The board members and especially the learning director were active in the learning policy and the learning programming. Their strategies were considered as a strengthening of the vertical dimension. The trainers were active in the qualification process and the learning program. Their strategies can be considered as strengthening the liberal dimension and the horizontal dimension. The strategies of the actors can be viewed as to some extent contradictionary to and to some extent correspondent with each other. In both cases we believe we found indications that different actors have different strategies. Through their actions in different processes in the learning network they try to influence the learning network development line in a direction that is more suitable.

Learning systems have a certain durability, but fundamentally they are dynamic and in that way unstable, because actors actively operate within and with the structures and processes they encounter. As we saw, actors in variable relationships give continuously form to the three main processes of the learning system. In that way we believe there is no one-best-way for developing learning systems in organizations. Simple and universally valid recipes for improving learning networks cannot be given. The learning network theory sees improvement as a 'normal' process in a learning network development process. The actors in and around the learning networks give new impulses to the three main processes. The possibilities that actors have to realize such improvement depend highly on their position in the network and on their and other actors' action theories.

How this research contributes to new knowledge in HRD

There is a narrow empirical basis of the analysis of actions and strategies of actors. Insights in actions and strategies of actors can give a better understanding of ways to improve learning networks. Findings of this study underline the importance of insights in actor actions and the directions of actor strategies. In future research we should refine this more in order to enhance our understanding of the learning network and its dynamics.

References

Baker, W.E. (1992), The network organization in theory and practice. In Nohria, N. & R.G. Eccles (Eds.)of: *Networks and Organizations: structure, form and action.* Boston, Massachusetts (Harvard Business School Press), 397-429.

Brinkerhof, R.O. & S.J. Gill (1994), *The learning alliance - Systems thinking in human resource development.* San Francisco (Jossey-Bass Publishers)

Marsick, V.J. & K.E. Watkins (1994) Sculpting the learning organization. San Francisco (Jossey-Bass Publishers).

Miles, M.B. & A.M. Huberman (1984), *Qualitative data analysis. A Sourcebook of new methods.* Beverley Hills, Ca (Sage)

Mintzberg, H. (1989), *Mintzberg on management.* New York (Free Press)

Nohria, N. (1992), Is a network perspective a useful way of studying organizations? In: Nohria, N. & R.G. Eccles (Eds.) of: *Networks and Organizations: structure, form and action.* Boston, Massachusetts (Harvard Business School Press), 1-22

Van der Krogt, F.J. (1995), *Leren in netwerken. Veelzijdig organiseren van leernetwerken met het oog op humaniteit en arbeidsrelevantie.* Utrecht (Lemma)

Van der Krogt (in press): Learning Network Theory; the tension between learning systems and work systems in organizations. *Human Resource Development Quarterly.*

Learning-project Structures in Different Work Types: An Empirical Analysis

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This study demonstrates that work-related learning projects can be organized using different structural arrangements. Sixteen learning projects conducted by ninety-six participants in three different work types were analyzed and compared both qualitatively and quantitatively. Learning-project structures were found to be related to the type of work in which they were carried out, but only to a certain extent. In some cases, the choices made by the participants resulted in learning-project structures that were different from the ones expected solely on the basis of the work type.

A learning project is an instrument to systematically organize learning activities around a central work-related theme or problem (Poell & Van der Krogt, 1997). By solving work-related problems in a learning project, participants can enhance their qualifications and improve their work at the same time. An example of a learning project is an interdisciplinary group of medical doctors who learn to perform a novel treatment by developing a series of work-based experiments supplemented with evaluation sessions; or, a group of organizational consultants who improve their advisory skills by a combination of theoretical study, practical experiments, intervision, and supervision sessions (Poell, Tijmensen, & Van der Krogt, 1997).

These examples show that learning projects can be organized in different ways. Four theoretical models of learning projects can be derived from the learning-network theory (Poell, Van der Krogt, & Wildemeersch, 1997a). The learning-network theory (Van der Krogt & Warmerdam, 1997) explains how corporate learning systems are organized by relating them to the organization of work (Mintzberg, 1979). We apply this line of thought to the group learning level, inferring that the organization of group learning projects is related to the type of work in which they are carried out.

This study focuses on the structural arrangements within learning projects, namely the profile of the learning program (content structure), the division of tasks among the participants (organizational structure), and the incorporation of norms and values with regard to learning (climate). The four models that were derived from the learning-network theory, and their relationship to various work types are summarized in Table 1.

Vertical learning projects are highly pre-structured, usually by a trainer. The learning activities prepare the employees for specific and well-defined tasks. These are neatly designed and linear learning programs, with fixed rules as to who is responsible for what actions. This type is expected in machine-bureaucratic work, which is characterized by extensive task-division and little complexity. In *horizontal* learning projects, the responsibilities are not centralized in the hands of a trainer but equally distributed among all participants. Employees as a group try to find solutions to organizational problems in an incremental way. Group learning is integrated with organizational problem-solving. We expect to encounter this type in adhocratic group work, which features highly complex and ill-structured, often interdisciplinary group tasks. In *external* learning projects, employees are inspired by professional developments outside their own organization. The learning activities equip the employees to become better at their profession. The learning program incorporates the latest insights from the professional domain. This type is assumed to occur in professional work, which has highly complex but reasonably well-defined jobs. *Liberal* learning projects give individual employees the freedom to choose a learning program encompassing loosely coupled activities without much of a group structure. Each individual is empowered to solve his own work problems, and responsible for his own learning. We expect to find this type in entrepreneurial work, which is characterized by individuals performing ill-structured but not too complex jobs.

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Table 1. Four Theoretical Types of Learning Projects in Terms of Structures, and the Corresponding Work Types

	Vertical	*Horizontal*	*External*	*Liberal*
Content Structure	task oriented	organization oriented	profession oriented	unstructured
Organizational Structure	centralized	egalitarian	externally inspired	loosely coupled
Climate	regulated	integrative	inspiring	liberal
Corresponding Type of Work	machine-bureaucratic work	adhocratic group work	professional work	entrepreneurial work

A notion underlying the theoretical framework described above is that a certain work type more or less calls for corresponding learning-project structures. But is this a valid notion? Are learning-project structures really determined by the type of work in which they are carried out? In order to shed light upon this problem, the following research questions are investigated.

1. In which types of work do learning projects take place?
2. Which types of learning projects can be distinguished on the basis of their structures?
3. Are the structures related to the type of work in which the learning project is conducted?

We hypothesize that learning-project structures will emerge in accordance with the type of work in which they are conducted, as summarized in Table 1.

Methodology

Design. The study is a comparative analysis of sixteen learning projects conducted by employees, managers, and HRD staff. The learning projects were selected to include different work types, especially along the machine-bureaucratic/professional dimension. The study was designed as a multiple case study combining qualitative and quantitative cross-case analysis (Miles & Huberman, 1994). Ninety-six people in six organizations took part. The number of participants per learning project ranged from three to twelve. An overview of the sixteen cases in terms of the participants, their organizations, and the themes to their learning projects, is provided in Table 2.

Procedure. All available documents of each learning-project case were studied, for example minutes of learning group meetings, proposals for learning programs, and evaluation sheets. Participants were selected for interviews on the basis of these documents and initial talks with key persons. Employees, managers, and HRD staff were interviewed about the learning project using a semi-standardized topic list. Interview topics included: participant's definition of the central problem; learning activities undertaken by the participant; the role played by the participant in the policy development, program development, and qualifying process; work characteristics. The interviews lasted sixty to ninety minutes and were tape-recorded.

Fourty-one interviews for cases B1, B2, D1, D2, E1, E2, F1, and F2 were held from September, 1996 through June, 1997. Two to three page summaries were made by the interviewer and offered to participants for correction and legitimization. Twenty-seven summaries (65 %) were returned to the interviewer containing additional information. Analysis of these eight cases was performed using twenty-seven corrected and fourteen initial interview summaries, supplemented with the available documents.

Table 2. General Characteristics of Sixteen Learning-project Cases

Organization	*Case*	*Learning Theme / Problem*	*Participants*
Institution for Mentally Handicapped	A1	developing a care vision	community supervisors
	A2	individual care planning	community supervisors
Electronics Firm	B1	optimizing work processes	process operators
	B2	improving internal communication	developers, technicians, process operators
Academic Hospital	C1	developing a new work method	medical doctors
	C2	introduction of new work equipment	nurses
	C3	multidisciplinary collaboration	medical doctors, paramedics
	C4	patient-centred care	nurses
General Hospital	D1	efficient work planning	chemical analysts
	D2	functional differentiation and collaboration	nurses
	D3	improvement of work climate	secretaries, administrative staff
	D4	improvement of work climate	chemical analysts
Night School for Adults	E1	open learning for adult students	teachers (liberal arts)
	E2	self-directed learning of immigrant students	teachers (Dutch as a second language)
Consultancy Firm	F1	the learning organization	HRD consultants
	F2	the learning organization	innovation consultants

Fifty-five interviews for cases A1, A2, C1, C2, C3, C4, D3, and D4, which were held from April, 1994 through June, 1995, were re-analyzed. Twenty-four full transcripts and fifty-five summaries of the interview sessions were used in the analysis of these eight cases, supplemented with the available documents.

Qualitative Analysis. A computer program for qualitative data analysis, called Kwalitan (Peters & Wester, 1990), was used to score interview scenes. In order to answer the first research question, the work type in each case was compared with the four theoretical models of machine-bureaucratic work, adhocratic group work, professional work, and entrepreneurial work. In order to answer the second research question, a qualitative analysis was conducted for each learning project, focusing on the content structure, the organizational structure, and the learning climate. To determine the nature of the structures, they were compared with the four theoretical models of learning projects.

Quantitative Analysis. To sustain and extend the initial analysis, the qualitative information was quantified. The learning-project structures were scored on four nine-point Likert scales to reflect the extent to which they resembled each of the four theoretical models. For instance, if the organizational structure was found to be egalitarian, the horizontal type scored '9' and the other types '1'. If the content structure was both profession and problem oriented, the external and horizontal types scored '5' and the other two '1'. This enabled us to compute the differences (in terms of the Euclidean distances) between the learning-project cases. A similar procedure was used to quantify work types. The work type was scored on four nine-point Likert scales to reflect the extent to which it resembled each of the four theoretical models. The quantification procedure enabled us to conduct an hierarchical cluster analysis of both learning-project types and work types, based on squared Euclidean dissimilarity coefficients. In order to answer the third research question, the learning-project clusters were cross-tabulated with the work clusters.

Results

Table 3 describes the results of the qualitative analysis of sixteen cases. They were found to differ with respect to the work type. The learning projects were found to differ regarding their content structure, organizational structure, and climate. These results are elaborated below.

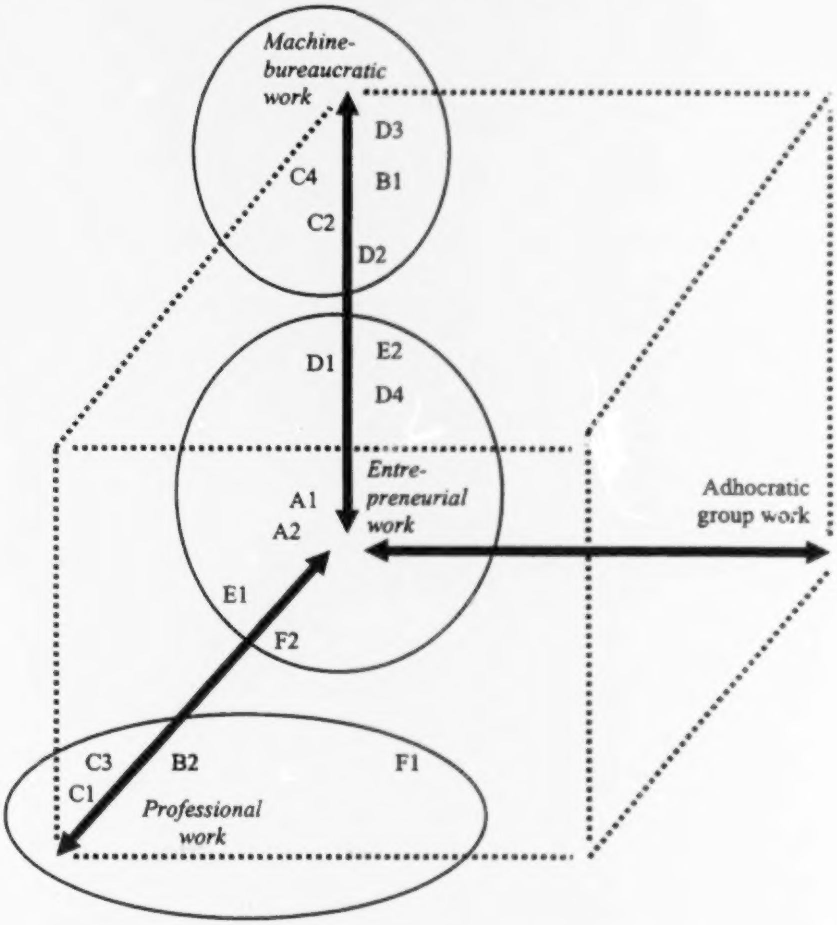
Table 3. Sixteen Learning Projects Characterized by Work Type, Structures, and Learning-project Type

	A1	A2	B1	B2	C1	C2	C3	C4	D1	D2	D3	D4	E1	E2	F1	F2
WORK TYPE	e	e	m	pe	p	me	p	me	em	me	m	em	ep	em	pa	ep
STRUCTURES																
Content Structure	t	up	pot	op	po	t	op	to	tpo	uo	to	to	po	t	up	pu
Organizational Structure	c	lcx	c	cel	xe	c	ex	c	c	lce	ce	ce	e	lc	l	x
Climate	r	l	gl	gl	ig	r	gi	r	r	l	rg	rg	gli	lr	lg	li
LEARNING-PROJECT TYPE	v	lxv	vhxl	hlvx	xh	v	hx	vh	v	lhv	vh	vh	hx	vl	lhx	xl

Note. Four kinds of work: m = machine-bureaucratic, a = adhocratic group, p = professional, e = entrepreneurial. Four kinds of content structure: t = task oriented, o = organization oriented, p = profession oriented, u = unstructured. Four kinds of organizational structure: c = centralized, e = egalitarian, x = externally inspired, l = loosely coupled. Four kinds of climate: r = regulated, g = integrative, i = inspiring, l = liberal. Four kinds of learning-project types: v = vertical, h = horizontal, x = external, l = liberal.

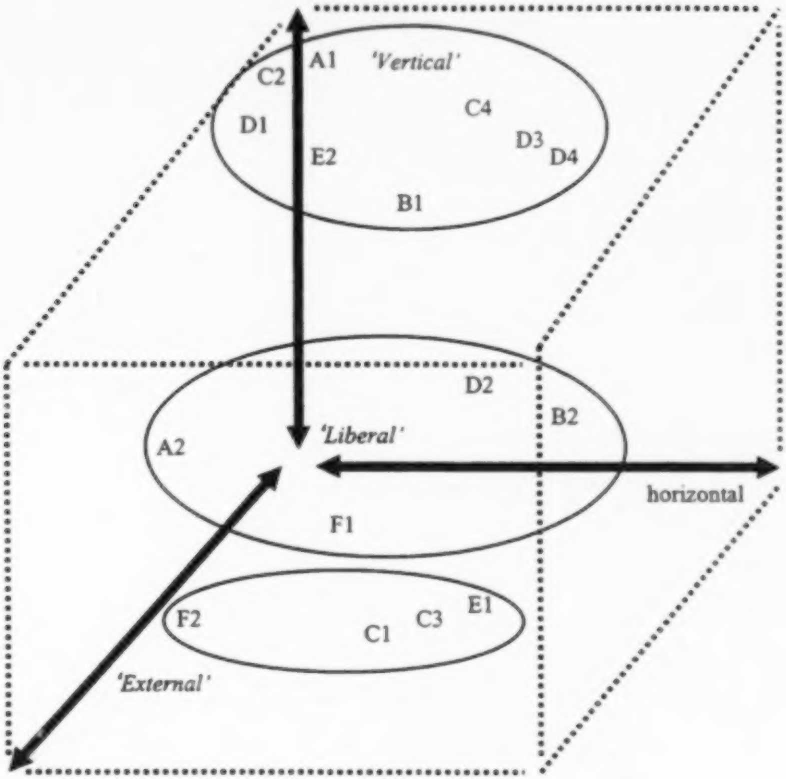
Types of Work. As shown in Figure 1, the sixteen cases were found to cluster around three types of work, namely machine-bureaucratic work (n=5), entrepreneurial work (n=7), and professional work (n=4). In no cases the work type was found to resemble adhocratic group work. As a result of the clustering process, the participants in this study deemed to perform machine-bureaucratic work include the process operators, nurses, and secretaries; entrepreneurial work is carried out by the community supervisors, chemical analysts, teachers, and innovation consultants; professional work is conducted by the process developers, medical doctors, and HRD consultants.

Figure 1. Characterization of Cases by Work Type


Machine-bureaucratic work
D3
C4
B1
C2
D2
D1
E2
D4
Entre-preneurial work
A1
A2
Adhocratic group work
E1
F2
C3
B2
F1
C1
Professional work

Learning-project Structures. The variation in learning-project structures as compared with four theoretical types is indicated in Figure 2. On the basis of these structures, three clusters of learning projects emerged from the analysis. These are referred to as 'Vertical' (n=8), 'Liberal' (n=4), and 'External' (n=4) learning projects. Each cluster encompasses some cases with horizontal structural elements, which makes the types more hybrid.

Figure 2. Characterization of Cases by Learning-project Type (Based on Structures)


A1
'Vertical'
C2
D1
C4
D3
D4
E2
B1
D2
B2
'Liberal'
A2
horizontal
F1
E1
F2
C3
C1
'External'

The Relationship Between Learning-project Structures and Work Type. Table 4 shows the relationship between learning-project structures and work type. No 'Vertical' learning projects were found in professional work. Similarly, no 'External' learning projects emerged in machine-bureaucratic work, where 'Vertical' learning projects were most encountered. 'Liberal' learning projects appeared in all three work types. Entrepreneurial work mainly produced 'Vertical' learning projects.

Table 4. The Relationship Between Learning-project Type and Work Type

Work Type *Type of Learning Project*	*Machine-Bureaucratic*	*Entrepreneurial*	*Professional*	*n*
'Vertical'	4	4	0	*8*
'Liberal'	1	1	2	*4*
'External'	0	2	2	*4*
n	*5*	*7*	*4*	*N=16*

Note. Chi-square=6.629, df=4, sig.=.157

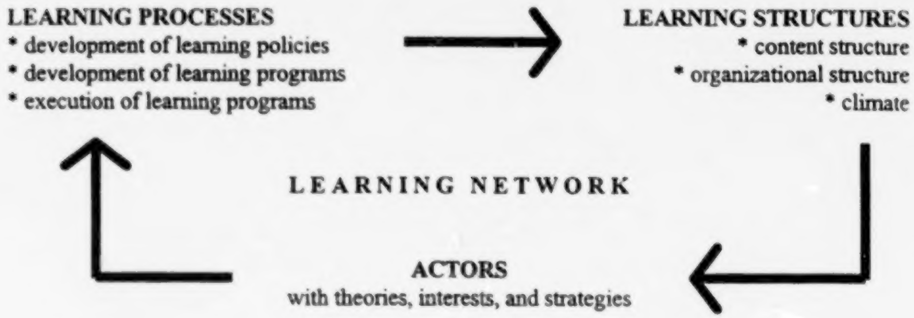
Conclusion

The results show that learning projects can be organized in many different ways. And although there is a certain relationship between learning-project structures and work type, the latter does not determine the former. A comparison between Figures 1 and 2 shows the variation in learning-project types to exceed the variation in work types. It appears to be unlikely that learning-project structures are totally different from the corresponding work type. On the other hand, knowledge about the work type does not imply knowledge about the exact kind of learning project to be expected.

This result can be explained by the concept of organizational choice (Child, 1997), meaning that the structure of organizations is never completely determined by its environment because people's actions are also crucial. Participants in learning projects can choose to create learning structures that are related to the current work type to a greater or lesser extent (Poell, Van der Krogt, & Wildemeersch, 1997b). In some cases, the participants will create learning-project structures that correspond exactly to work characteristics. In other cases, they will use different strategies, for instance in order to change the content or organization of work.

The learning-network theory (Van der Krogt & Warmerdam, 1997) provides a similar explanation. On the one hand, it regards the structure of a learning network as resulting from the interactions between organizational actors (e.g., employees, managers, trainers, and external bodies), whilst creating processes such as the development of learning policies, the development of learning programs, and the execution of these programs. This relationship between process and structure is embodied in the top arrow of Figure 3. On the other hand, the structures that are thus (re-)produced influence the actors in the choices they make. The options for organizational choice are provided but also limited by the existing structural arrangements. This relationship between structure and organizational actors is visualized in the bottom right arrow of Figure 3. The remaining bottom left arrow indicates that different actors have different theories and interests upon which they act. Only when interacting to create learning processes do the different strategies of organizational actors come to the fore. The latter observation is more fully investigated in Poell, Van der Krogt, & Wildemeersch (1997b).

Figure 3. Organizing learning as a network


LEARNING PROCESSES
* development of learning policies
* development of learning programs
* execution of learning programs
LEARNING STRUCTURES
* content structure
* organizational structure
* climate
LEARNING NETWORK
ACTORS
with theories, interests, and strategies

References

Child, J. (1997). Strategic choice in the analysis of action, structure, organizations and environment: retrospect and prospect. *Organization studies, 18*(1), 43-76.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). London: Sage.

Mintzberg, H. (1979). *The structuring of organizations*. Englewood Cliffs, NJ: Prentice Hall.

Peters, V., & Wester, F. (1990). *Qualitative analysis in practice: Including user's guide Kwalitan version 2*. Nijmegen: University of Nijmegen, Department of Research Methodology.

Poell, R. F., Tijmensen, E. C. M., & Van der Krogt, F. J. (1997). Can learning projects help to develop a learning organisation? *Lifelong Learning in Europe, 2*(2), 67-75.

Poell, R. F., & Van der Krogt, F. J. (1997). Organising work-related learning projects. *International Journal of Training and Development, 1*(3), 181-190.

Poell, R. F., Van der Krogt, F. J., & Wildemeersch, D. A. (1997a). *Solving work-related problems through learning projects*. Manuscript submitted for publication.

Poell, R. F., Van der Krogt, F. J., & Wildemeersch, D. A. (1997b). *Strategies in organizing work-related learning projects*. Manuscript submitted for publication.

Van der Krogt, F. J., & Warmerdam, J. H. M. (1997). Training in different types of organizations: Differences and dynamics in the organization of learning at work. *International Journal of Human Resource Management, 8*(1), 87-105.

The GEICO Challenge Session: A Model for Integrating Human Resource Development and Strategic Planning

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The purpose of this study was to delineate the nature of the integration of human resource development (HRD) into the strategic planning process of the Government Employees Insurance Company (GEICO), a nationwide insurance corporation. This study revealed that the GEICO challenge session offers an excellent working model of integrated strategic planning. The high level of integration provided by the challenge session also is influenced by a number of factors identified in an earlier work by one of the authors. These factors include external business conditions, internal top management support, internal HRD person-specific factors, and internal organizational factors.

A post-World War II process, strategic planning came to the United States in the 1960s. General Electric is generally credited with pioneering strategic planning in the United States (McCune, 1986). Since that time, hundreds of large, well-known corporations have prepared and implemented strategic plans. While there remains some controversy as to the link between strategic planning and improved company performance, the evidence is mostly favorable (Boyd, 1991; Shrader, Taylor, and Dalton, 1984).

As businesses move into the uncertain final years of this century, they are more and more vulnerable to unpredictable competitive and environmental influences. It becomes increasingly important that planning tools be sophisticated and comprehensive and that managers be innovative in designing their management systems. Many companies have begun to recognize, however, that these comprehensive corporate plans have not always been implemented as desired and that programs have not been prepared to meet the strategic needs of the organization. Thus, there has been a growing recognition for the need to integrate all operating levels into the strategic planning process (Miller, 1989).

Below, Morrisey, and Acomb (1987) argued that since the strategic planning process requires the continuous involvement of the operating executives throughout the organization, there should be an emphasis on team planning, which builds commitment. The strategic plan should be developed as part of an *Integrated Planning Process*. According to Below et al., "*Integrated* means that no part of the planning process can be developed in isolation from the other parts. *Planning* incorporates all of the efforts that determine what an organization wants to be, where it is going and how it will get there" (p. 3, 4).

The integrated planning process ensures that everyone in an organization participates in the preparation of the plan and that everyone in the organization understands the plan. Unfortunately, few organizations include everyone in the planning process. Notably absent from this body of strategic planners have been the human resource executives, particularly the person(s) charged with the responsibility of Human Resource Development (Benoliel, 1988; Chalofsky & Reinhart, 1988; Linkow, 1985; Miles & Snow, 1984; Rothwell & Kazanas, 1989). As businesses approach the end of this century and its ever-changing environment, it is particularly ironic that the human resource development (HRD) practitioner, who is responsible for the training and development of the most costly and valuable asset in any business, either has no strategic plan or has a plan that is not integrated with the organization's strategic plan.

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Based on a major study, Chalofsky and Reinhart (1988) developed an HRD effectiveness model. Among other things, their study indicated that effective HRD managers participate in strategic planning and are committed to supporting organizational change through strategic planning. Moreover, Nadler and Nadler (1990) stated, "HRD may be the key element in the strategic planning process" (p. 2.13). Numerous reasons have been offered for linking human resource development into the strategic planning process, and for a stronger leadership role for HRD (Abelson, Ferris, & Urban, 1988; Nadler & Nadler, 1990; Peery & Salem, 1993; Sonnenfeld & Ingols, 1986; Torraco & Swanson, 1995; Willis & May, 1996).

Research specifically directed toward the study of the integration of HRD into the strategic planning process of organizations is rare. Benoliel (1988) and Bianco-Mathis (1989) reported research related to HRD's participation in strategic planning or strategic change. Garavan (1991) surveyed 90 companies and concluded that the formulation of HRD policy and plans is necessary in order to have a strategically oriented HRD function. Hussey (1985) maintained that a close integration of training and company strategy is needed, and this will only happen when the chief executive takes the initiative. Similarly, Bolt's (1985) survey research of four respected U.S. corporations (General Foods, Xerox, Motorola, and Federated Department Stores) led him to conclude that the impetus for developing executive training and development programs that are tied to the implementation of company strategy comes from the top of the organization. Redding (1990) also concluded that strategy-linked training stems from a commitment from top management. Several authors have prepared case studies of their organization's efforts to integrate HRD and strategic planning (Beattie and Tampoe, 1990; Galosy, 1983).

Research Questions

The purpose of this research was to delineate the nature of the integration of HRD into the strategic planning process of GEICO. Earlier research (Conine, 1997) included GEICO as one of three anonymous participants in a comparative case study on the integration of HRD and strategic planning. In this previous work, GEICO was identified as a company that had strongly integrated HRD into its strategic planning process. While a number of factors contributed to this high level of integration, GEICO's strategic planning process, *the challenge session*, was unique and deserved further study. Thus, this study builds on the previous work by expanding the study of one of the major factors (i.e., the planning process) found to influence the level of HRD's integration into a strategic planning process. More specifically, it addresses the following question: How is the role of HRD defined in GEICO's strategic planning process?

Methods

Descriptive case study was the basic research design. Data collection at GEICO included the use of interviews, observations, and document analysis. Seven people were interviewed, and three persons were interviewed twice. The director of staff services served as key informant. Other managers interviewed included the regional vice president, the director of human resources, the regional trainer, the director of sales and service, the regional claims manager, and the assistant vice president. These interviews were tape-recorded and transcribed. Observations were made at the plant site, office facilities, and strategic planning sessions. Field notes were taken at each of these observations and were organized into typed narrative accounts shortly after each observation. For the purpose of this investigation, the term *documents* is meant to include any data gathered through sources other than interviews or observations. Documents reviewed included an organization chart, company promotional materials, a planning memorandum from the CEO, strategic plans, and other planning documents.

During data analysis, the value of having maintained this case study database became evident. The transcripts, field notes, and document summaries were read line-by-line, word-by-word to identify references to integrating HRD and strategic planning. The data were subjected to GEICO member checks to ensure accuracy. Eventually, this data became the basis for a detailed description of GEICO and its strategic planning process. The researchers acknowledge the research limitations inherent in a single, purely descriptive case study. Yet they suggest that the information provided here is useful in an area where little research has been conducted. As Merriam (1988) stated, "Innovative programs and practices are often the focus of descriptive case studies" (p. 27). As the reader will note, the GEICO challenge session is an innovative practice.

GEICO: Region III

GEICO, Region III, is part of a national insurance corporation with its corporate headquarters in the Northeastern United States. The company started 61 years ago with the idea of selling insurance directly to the public without agents. Since then, the number of policyholders has grown to over 2 million, and A.M. Best Company, the top independent analyst of insurers in the country, has consistently rated the company A++ (Superior). What started out as a novel idea has become a model for the industry today. More and more companies emulate GEICO by using telephone centers to service customers and by providing around-the-clock service. A number of developmental lines (e.g., homeowner's insurance) have been tried by GEICO over the years, but they have not proven very profitable. So the company now focuses on the line in which it has been extremely successful, that of automobile insurance. The company takes pride in presenting itself as a low-cost provider in the private passenger automobile insurance market. It has a 24-hour, toll-free number for policyholders' use throughout the country. The company places great emphasis on being productive and efficient, and provides "faster, better, and cheaper" service than competitors.

The company has been in a growth mode for a number of years; projections for 1997 and beyond call for a growth rate of more than 20%. Warren Buffett, a major stockholder with a reputation for investing in successful companies, recently purchased GEICO. Around 2,400 people are employed in Region III. Most, about 1,900, are in the immediate metropolitan area of Macon, Georgia, but some work from offices (e.g., adjustors' offices) spread throughout several states in Region III. The top executive is the regional vice president. Reporting directly to the regional vice president is the director of human resources, the assistant vice president over claims, the assistant vice president over underwriting, the manager of planning and financial control, the director of staff services, and a branch manager located in a high volume state.

The two major operations in the company are underwriting and claims. The underwriting division is responsible for underwriting policies, sales and service of policies, and marketing activities. The claims division is responsible for providing quality service to customers when they have a claim while at the same time controlling the loss costs for the company. The other divisions, including the human resource division, are primarily support units to the underwriting and claims divisions.

Interviews, observations, and document analysis portray a company with an unusual amount of emphasis on developing human resources. The company provides career counseling, orientation before training, assessment, and a number of other services to encourage people to get involved in education. Areas of responsibility under the human resources department include employment and benefits, security, licensing, and education as well as the medical unit. The licensing coordinator and the coordinator of education are responsible for most of the HRD activities for company employees. In addition, a regional trainer reports to the assistant vice president of underwriting. The regional trainer is responsible for the training and development of managers and supervisors within Region III.

The GEICO Challenge Session The regional vice president and his staff are responsible for preparing a strategic plan for Region III, complete with a mission statement, vision statement, and objectives. Although the corporate office in the Northeast provides some broad general guidelines, the region has considerable autonomy in developing a plan to meet the regional objectives. Like most successful strategic planning initiatives, the process is never ending, but the major focus of the planning effort usually comes during late summer when the company is gearing up for the next calendar year. During this time a unique process brings together all these managers, supervisors, and many employees into a highly participative strategic planning initiative.

Around the middle of the summer, the CEO at the corporate office sends a memo to the planning center managers in the region. In this memo, the CEO outlines the vision, the overall strategy, and some key initiatives for the company. As a further subset of the chairman's planning letter, the regional vice president issues both the chairman's letter and his own "stretch goals" which focus on strategies for his particular region. With this charge, the managers begin work on the strategic plan for the region and in doing so prepare for what the company calls a division business plan review process which can last two weeks or more. Each department in the organization is required to follow this same process and then is challenged by other departments. Moreover, before going to the challenge session, a department has already been challenged within its own ranks. A key component of the challenge session is purposeful involvement of every division in the region and corporation. Plan review or *challenge sessions* are open for attendance by associates at all levels in the organization. As an extension of GEICO's total quality process, those who do the work frequently have solutions to offer which are not readily known to the managers.

The HR department and the regional trainer's office are involved in this process as are all the other departments in the building. When the HR manager attends the challenge session, she is accompanied by her staff, and the people representing the HRD functions must be ready to respond to questions from challengers related to the business side as well as "pure" HR issues. It should be noted that the integration process for the HR director is greatly enhanced by her previous assignment as manager of the planning and financial control division. Rather than being an HR "purist," the director is a true business partner with the line operations. Likewise, the regional trainer must be ready to defend goals specific to management development from an overall organization perspective, based on the projected needs of the line departments. Managers, supervisors, as well as nonsupervisory people are invited to attend these sessions, do so, and participate actively. These challenge sessions are also an opportunity to identify ways that departments can and must work together to achieve regional (and subsequently company) goals which are, by their nature, interrelated.

One of the on-site observations offered an opportunity to observe for about seven hours one of these challenge sessions in progress. The on-site observation occurred during the challenge of the auto damage (AD) department within the claims division. The challenge was held in a large room (approximately 1700 plus square feet) with doors entering the room from the side and the rear. The director representing the AD department stood at the head of the room surrounded by a podium, table, overhead projector, screen, and television monitor. Throughout the room, there were a number of supervisors and employees from various departments. With the door in the back, people were able to come in and out of the room as they wished for various sessions or pieces of sessions.

During the day, the director of AD was challenged, questioned, and cajoled. Suggestions were offered, strategic decisions were made on the spot, and areas for further research were identified. There was continuous give-and-take between the director of AD, his staff, other people in claims, and people from other divisions. While there were considerable differences of opinion, there was no hostility. In fact, there was quite a bit of good-natured humor in the criticisms. It was clearly meant to be a forum for constructive criticism of this part of the strategic plan, and it was a good example of how conflict can be a constructive rather than destructive force in an organization. Everyone had ample opportunity to speak and many did. The regional vice president was the most vocal member of the challengers, but few refrained from making a comment. The director of human resources and the regional trainer were also very vocal in offering suggestions and throwing out questions, often in areas that were not directly within their area of expertise. They quizzed the presenter from the claims area on elements of his plan that might involve training and development issues and also on issues outside of the traditional HRD realm. For instance, when the director of auto damage began talking about company policy matters beyond his control that affected customer satisfaction in the claims area, the director of human resources prompted and participated in a long discussion about possible changes in those long-standing policies when she said, "O.K., [Gary], if you were the owner of this company, what items would you change in the company policy?" Before the discussion ended, the regional vice president had even directed people to review some of those company policies to see if changes might be made. In another instance, the director of human resources challenged a specific item in the plan about improving graduation rates from the auto damage basic course. After a short discussion, the item was immediately struck from the plan.

The human resources department and the regional trainer played a strong role in the strategic planning process of GEICO. Their activities included writing segments of the strategic plan, participating in the challenge sessions, anticipating needs of other departments, assessing the personnel and training and development needs, and planning for implementation (e.g., a training schedule is a part of the strategic plan). Yet, they do not have total control over the HRD activities in the company; each department has ample opportunity in the challenge sessions to question HR and HRD goals and objectives.

Division plans are developed, challenged, and revised based on the regional review sessions, then "re-hashed" within the individual units to develop additional action plans to meet the revised goals or strategy. The modified division plans are then forwarded to the Planning and Financial Control department where they are independently matched to revised budgets for the coming calendar year. In a continuation of the development of an overall regional plan, the regional vice president and his direct reports (of which the HR director is one of the six) pull action plans deemed critical or very important from the divisions plans to build the draft regional plan. In subsequent reviews by the same group, weaknesses or shortcomings in the regional plan are identified and supplemental action plans are solicited from the management/associate group.

The HR director and five other direct reports then present the cohesive regional plan to the CEO and corporate "challengers" at a meeting in the regional office, usually in a one-day session. These sessions also are open to all associates and managers, and always provide a wide exchange of ideas between participants. The same kind of good-natured humor is found in these sessions as well although the underlying current here, too, is a tough businesslike approach to goal-setting and action plans covering both immediate and longer-range (more than one year out) plans and strategies.

A Stakeholder Role for HRD at GEICO The challenge session at GEICO plays a major role in integrating HRD into the strategic planning process and it has been the major focus of this current study. However, as indicated earlier in this paper, GEICO was one of three anonymous participants in an earlier comparative case study by Conine (1997). It would be misleading not to note that this earlier study identified other factors besides the planning process that influence the level of HRD's integration at GEICO and the other companies. In this earlier study, Conine developed a continuum of HRD roles with low to high levels of integration into a company's strategic planning process. These included the nonparticipant, the resource, the stakeholder, and the leader. At GEICO, HRD assumed a strong stakeholder role with potential to move into a leader role in the future. Factors other than the planning process that influenced the level of integration included top management support, HRD person-specific factors, and other internal organization factors.

All of these factors contributed to a strong stakeholder role for GEICO. The director of staff services at GEICO summarized HRD's stakeholder role well when he stated: "So, that's really the bottom line on it. Training is an integral part of every departmental plan, without exception. . . . Human resource development is an integral part of every plan." Evidence of a stakeholder role for HRD in the strategic planning process also was evident in several of the planning documents reviewed at GEICO. All departments' portions of the strategic plan that were reviewed included a major HRD initiative.

Persons interviewed at GEICO insisted that top management commitment is also a major reason HRD is in a stakeholder role. The director of staff services at the insurance company maintained that top management support comes in two forms: First, top management must provide the necessary staff needed to meet customer needs and still have time for training.

Second, top management must communicate the philosophy that training is absolutely critical to the survival of the organization. He further stated, "And you see that philosophy here. There's no scarcity of that at any level of top management."

HRD professionals at GEICO also appear to have credibility with line management because of their knowledge of the overall business and because of their competence in their area of expertise. The regional trainer at the insurance company felt that HRD benefits significantly from knowledge of business operations and thus gains the respect of line managers. Other key factors include the ability of HRD to communicate effectively with line management and HRD's proactive leadership style.

The GEICO culture also supports HRD activities. This was evident during the on-site observation of the strategic planning challenge session during which there was so much emphasis placed on developing people within the organization. The director of sales and service had the following to say about GEICO's culture: "We have developed this culture throughout the GEICO organization so that our supervisors understand that you're here for your associates. That's what your primary responsibility is. Your role is to assist the associates to be the best that they can be and to develop for a better job, and that is accomplished largely by removing obstacles which constrain their performance." Considering the time and costs, even the most integrated planning companies battle to keep focused on the long-term benefits of training and development. However, GEICO appears to have made this long-term commitment. The staff services director stated, "When you have a low-cost operating mentality and you want highly trained people being very productive . . . . Then taking a person out of that group and putting them into a training class for a day or two days, or a week affects your productivity very quickly. But it's something that's absolutely necessary and you have to do it!"

Almost everyone interviewed at GEICO mentioned company growth as a facilitator to the integration of HRD and strategic planning. This point was also noted during the on-site observation of the challenge session. The regional vice president authorized additional training, above and beyond what the department had already included in their plan, to accommodate the growing needs of the company. Specifically, the auto damage claims manager said he was unable to meet a goal in a timely manner because he only had authorization for four people to go through the training. Immediately, the regional vice president gave authorization for six and made it clear that an even higher number would be considered if justified.

Conclusions

The GEICO challenge session is a dominant factor in integrating HRD--or any other function, for that matter--into the strategic planning process of GEICO. Regardless of the level of commitment on the part of HRD and top management to involve everyone in the strategic planning process, there needs to be a mechanism to ensure the integration; the GEICO challenge session serves this purpose well. However, previous research has indicated that other factors (top management support, credibility of the HRD group, active involvement in and knowledge of business operations, etc.) also account for HRD's level of integration into the strategic planning process.

Implications

Inherently, the very nature of this inquiry examined the supposition that strategic planning should be an integrated planning process. Below et al. (1987) argued that an integrated planning process ensures that everyone in the organization participates in the preparation of the plan and that everyone in the organization understands the plan. In his letter to regional managers to kick off the strategic planning challenge process, the CEO of GEICO wrote, "In order to have committed associates, all must have a good understanding of our business strategy and be included in the planning process to carry out that strategy successfully." Chalofsky and Reinhart (1988) indicated that effective HRD managers participate in strategic planning and are committed to organizational change through strategic planning. The GEICO challenge session offers these opportunities to HRD professionals.

The systems view of organizations has been touted as the best theoretical framework for the HRD profession. Pasmore ((1988) described several features of sociotechnically designed organizations, including the maximization of cooperative effort through common goal setting, the involvement of employees in important decisions and the sharing of information, the importance of human resource development, and the assumption that people in the organization have the capacity to improve plans. These features were exemplified well by the challenge session at GEICO. In the sessions, HRD managers and other managers, supervisors, and associates had an opportunity to influence the strategic direction of the company; they were all treated as stakeholders in the process.

Ultimately, the generalizability of the findings in this descriptive study will be determined by what readers and users can apply to their particular situation. However, CEOs will be hard-pressed to find a better working model of integrated strategic planning than the challenge session approach used at GEICO. For HRD practitioners who tend to be excluded from the strategic planning process in their company, what better working model could they find to introduce their CEO to an integrated strategic planning process?

Future research in this area might include a comparative case study of the strategic planning process in several companies. Further, some type of survey research might compare many strategic planning processes and HRD's role in those processes.

References

Abelson, M. A., Ferris, G. R., & Urban, T. F. (1988). Human resource development and employee mobility. In R. S. Schuler, S. A. Youngblood, & V. L. Huber (Eds.), *Readings in personnel and human resource management* (3rd ed., pp. 320-329). St. Paul, MN: West.

Beattie, D. F., & Tampoe, M. K. (1990). Human resource planning for ICL. *Long Range Planning,* 23(1), 17-28.

Below, P. J., Morrisey, G. L., & Acomb, B. L. (1987). *The executive guide to strategic planning.* San Francisco: Jossey-Bass.

Benoliel, M. (1988). *Human resource development managers participation in strategic planning.* Unpublished doctoral dissertation, George Washington University, Washington, D.C.

Bianco-Mathis, V. (1989). *The role of human resource development during strategic organizational change.* Unpublished doctoral dissertation, George Washington University, Washington, D.C.

Bolt, J. F. (1985). Tailor executive development strategy. *Harvard Business Review,* 60(6), 168-176.

Boyd, B. K. (1991). Strategic planning and financial performance: A meta-analytic review. *Journal of Management Studies,* 28, 353-374.

Chalofsky, N., & Reinhart, C. (1988). *Effective human resource development.* San Francisco: Jossey-Bass.

Conine, C. T., Jr. (1997). The integration of human resource development into the strategic planning process: A comparative case study of three corporations. In R. J. Torraco (Ed.), *Academy of Human Resource Development 1997 Conference Proceedings* (pp. 100-107). Baton Rouge, LA: Academy of Human Resource Development.

Galosy, J. R. (1983, September-October). Meshing human resources planning with strategic business planning: One company's experience. *Personnel,* 60, 26-35.

Garavan, T. N. (1991). Strategic human resource development. *International Journal of Manpower,* 12(6), 21-34.

Hussey, D. E. (1985). Implementing corporate strategy: Using management education and training. *Long Range Planning,* 18(5), 28-37.

Linkow, P. (1985, May). HRD at the roots of corporate strategy. *Training and Development Journal,* 39, 85-87.

McCune, S. D. (1986). *Guide to strategic planning for educators.* Alexandria, VA: Association for Supervision and Curriculum Development.

Merriam, S.B. (1988). *Case Study Research in Education: A Qualitative Approach.* San Francisco: Jossey-Bass.

Miles, R. E., & Snow, C. C. (1984). Designing strategic human resources systems. *Organizational Dynamics,* 13(1), 36-52.

Miller, E. C. (1989, April). Strategic planning pays off. *Personnel Journal,* 68, 127-131.

Nadler, L., & Nadler, Z. (Eds.). (1990). *The handbook of human resource development* (2nd ed.). New York: John Wiley & Sons.

Pasmore, W. A. (1988). *Designing effective organizations: The sociotechnical systems perspective.* New York: John Wiley & Sons.

Peery, N. S., & Salem, M. (1993). Strategic management of emerging human resource issues. *Human Resource Development Quarterly,* 4, 81-95.

Redding, J. C. (1990). *An analysis of three strategic training roles: Their impact upon strategic planning problems* [CD-ROM]. Abstract from: Proquest File: Dissertation Abstracts Item: 9118775.

Rothwell, W. J., & Kazanas, H. C. (1989). *Strategic human resource development.* Englewood Cliffs, NJ: Prentice Hall.

Shrader, C. B., Taylor, L., & Dalton, D. R. (1984). Strategic planning and organizational performance: A critical appraisal. *Journal of Management,* 10, 149-171.

Sonnenfeld, J. A., & Ingols, C. A. (1986). Working knowledge: Charting a new course for training. *Organizational Dynamics,* 15(2), 63-79.

Torraco, R. J., & Swanson, R. A. (1995). The strategic roles of human resource development. *Human Resource Planning,* 18(4), 11-21.

Willis, V. J., & May, G. L. (1996). The chief learning officer: A case study at Millbrook distribution services. In E. F. Holton (Ed.), *Academy of Human Resource Development 1996 Conference Proceedings* (pp. 145-152). Austin, TX: Academy of Human Resource Development.

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Strategic Alignment and Performance

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The article develops a model of strategic alignment from earlier theoretical perspectives of organizational alignment. The model describes the relationships between elements of strategy, structure, culture, and performance. The degree of agreement between strategy, values, rewards, systems, and norms affects the efficiency and focus of the individual and group behavior that produces organizational performance. The model describes six dimensions of alignment and how leadership may act to increase alignment within each.

In an environment of increasing competitive pressure, globalization, and technological change it is a truism to say that organizations are complex. Despite our growing understanding of this complexity, we still struggle with the questions of how to manage and intervene in organizations to obtain high performance. With so many competing demands, the people, processes, activities, and cultural components of an organization often end up working at cross purposes.

Organizational health requires harmony, and organizational performance requires efficiency. The concept of organizational alignment embodies both of these ideas. The purpose of this article is to present a model of strategic alignment and to show how this model might guide the choice of techniques and strategies to increase organizational performance.

The Nature of Alignment

Webster's dictionary defines alignment as "the proper positioning or state of adjustment of parts in relation to one another." In the organizational context, "alignment is the degree to which an organization's strategy, design, and culture are cooperating to achieve the same desired goals" (Semler, p. 23, 1997). It is a measurement of the agreement or relative distance between several ideal and real elements of organizational life.

Strategic alignment is the extent to which the different components of organizational strategy, culture, and systems reinforce each others' contributions to organizational performance. A high degree of alignment leads to increased levels of performance. Effective leaders increase alignment by controlling or influencing the components of the six dimensions of alignment. Their goal in doing this is to enable the members of the organization to willingly commit their concerted behavior to activities and systems that efficiently bring about achievement of the organization's strategic goals. Strong alignment requires agreement, rather than conflict, between organizational components. Almost by definition, an organization that is well aligned is an efficient and cooperative organization.

History of Alignment

The concept of alignment is not new. Nadler and Tushman's (1989) congruence model of organization behavior was first published in 1979 and adequately represents the core of nearly all later discussions of organizational alignment. Later research has offered additional information that expands the power of their theory and extends the concept of alignment into improved organizational change models. Until recently, however, little theoretical work has been done to expand understanding of alignment in the behavioral sciences (Semler, 1997).

Most work that relies upon the idea of organizational alignment is either technical or cultural in nature, but rarely combines both. Some human resource development models suggest that positive alignment can be created by linking activities and processes to the organization's strategy. Proponents of these models suggest that managers can improve performance by ensuring that the output of each organizational process contributes to achievement of the organization's strategic goals. The reasoning behind this suggestion is that these activities and processes should be

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intentionally designed to increase their usefulness and contribution to performance (Beer, Eisenstat, & Biggadike, 1995; Pasmore, 1988; Rummler & Brache, 1995; Swanson, 1994). Because performance at the organizational level is largely guided by strategy (Beer et al., 1995; Pearce & Robinson, 1994; Rummler & Brache, 1995), the component activities and processes of the organization should be designed to contribute to the achievement of strategic objectives.

Other models that examine organizational alignment look at the agreement between an organization's culture and its chosen strategy, goals, and planned activities (Bennett, Fadil, & Greenwood, 1994; Kotter & Heskett, 1992; Tosti & Jackson, 1994). In these models, the goal of the intervention is to increase the agreement between the levels of organizational strategy and their corresponding levels of cultural belief and activity. Increased agreement at each of these levels leads to increased individual, team, and organizational performance through general harmony between culture and strategy. As in the previous category of models, alignment revolves around a link between strategy and behavior. The quality award framework of the Malcolm Baldrige National Quality Award (MBNQA) contains similar assumptions, even though it also prescribes linking activity and systems to strategy.

Blending technical or structural aspects with social or cultural aspects offers a more balanced and complete view of alignment that can show practitioners how to improve alignment within their client organizations (Pasmore, 1988). More recent writings by Galbraith (1994) and Semler (1997) expand the theoretical framework for this balanced sociotechnical view of alignment.

Alignment is not a static phenomenon. Once an organization has achieved strong alignment in each of the six dimensions of alignment, it will still have to reassess and maintain its vigilance. Beer, Eisenstat, and Biggadike (1995) emphasize that realignment is necessary every time that there is a significant change in the organization or its operating environment. Organizational culture is a way of maintaining and transmitting the values, norms, and practices that have been successful in the past (Schein, 1990). Kotter and Heskett (1992) point out in their research on organizational culture that organizations that were previously star performers lost their star status when market conditions changed but the organizations' cultures kept them doing things in the same ways as before. A systematic process to ensure continuing reassessment of external and internal conditions is a requirement for a self-aligning organization.

Particular characteristics of strong alignment are (a) the feeling of collaborative action and mutual support of members within the organization (Kiefer & Stroh, 1984), (b) the sense of a mutually defined and organizationally shared vision (Dannemiller & Jacobs, 1992), and (c) work systems that are intentionally designed to be compatible with each other, with the social aspects of the organization, and directed toward achievement of the strategic vision (Galbraith, 1987; Juran, 1992; Rummler & Brache, 1995). These ideas represent the heart of alignment–that the members of the organization can work together in common-sense systems to reach a preferred future that they have envisioned.

Alignment in Practice

Kotter's (1996) work on leading change in organizations emphasizes the value of communication. In order to bring about successful change, leaders have to understand where they want the organization to go. Frequently, they will find this out from the employees. Wise leaders in complex competitive environments empower their employees with the vision, the urgency, and the broad direction of change. Being able to convey clarity of purpose is an increasingly important leadership skill (Davis, Skube, Hellervik, Gebelein, & Sheard, 1996; Quast, Hazucha, & Johnson, 1993). Clarity of purpose is what helps bring about alignment.

The primary benefit of strategic alignment is that it gives leaders greater ability to control and predict organizational behavior and performance. High performance work systems, globally competitive organizations, and large scale HRD interventions take advantage of the concept of alignment to increase performance (Gephart & VanBuren, 1996; Dannemiller & Jacobs, 1992). One difficulty with previous attempts to influence alignment is that very little has been published to explain the determinants or leverage points that would help leaders and HRD practitioners understand and affect alignment in more than a casual manner. The strategic alignment model helps to bridge this gap.

Development of the Model

This model of strategic alignment was developed from the author's earlier work and was informed by a continuing literature search and by the lessons of reflective practice.

The Former Model. The previous dynamic model of alignment (Semler, 1997) was the first attempt to capture all of the relevant variables and relationships that pertained to the alignment construct. While it was inclusive, it also had some weaknesses. It was unnecessarily complex, with ten primary variables. It failed to include performance as an outcome variable, weakening its utility to practitioners. It also did not explain how leadership affected or contributed to alignment. As a first attempt at explaining the construct of alignment it was very useful and effective. To bring the model to a testable state, and to make it simple yet powerful enough for practical use, would require further work.

Model Simplification. The dynamic model of alignment was first developed in 1995, and published in the *Human Resource Development Quarterly* in early 1997. Peer review of the dynamic model of alignment uncovered both strengths and weaknesses. The two major weaknesses, as noted previously, are the lack of a performance component and a level of complexity that makes the model cumbersome to explain. Several academic reviewers commented that the model seemed too deterministic given the increasing evidence suggesting that organizations are complex non-linear systems. Some also questioned a basic premise of alignment–that increased alignment has a positive effect on performance–by suggesting that too much alignment might impair organizational flexibility and thereby decrease competitive performance. In this view, "over-alignment" could reduce openness to diversity of thinking and ideas and make the organization too rigid in response to changing conditions. An improved model would have to take these criticisms into account.

The strategic alignment model was developed using the dynamic model of alignment as a basis. Literature review and analysis of the model verified the core variables and suggested areas for simplification.. If strategy were redefined slightly, it could easily account for the influence of both strategic goals and tactics from the dynamic model. Environment was removed from the model as a distinct variable, and was replaced by the consideration of environmental opportunities under strategy. Human resource development (HRD) was removed from the model as a tertiary mediating variable. Performance was simplified and further defined, although the previous definition would still be usable. Behavior was added as a variable, providing the link between processes and performance (O'Reilly, 1989). The influence of processes was changed in response to literature (Galbraith, 1987; Campbell, McCloy, Oppler, & Sager, 1993) that suggested that process capability mediates behavior. The variable labeled reward systems was altered to include non-rational and interpersonal rewards and incentives and relabeled as rewards (Kerr, 1989). In addition, the linkages between leadership and other variables were removed because they did not bear the same sort of relationship as the other linkages in the model. Leadership was removed as a variable and given a different status in the theory. The improved model that resulted was simpler and held greater explanatory power than previous models of alignment.

The Strategic Alignment Model

Strategic alignment is the term that refers to the degree to which all components of the organizational system are cooperating to produce the desired strategic behavior and results. The outcome of strategic alignment is organizational performance. The specific domains of performance that an organization considers important vary case by case. Stakeholder theory suggests that performance must be considered for all stakeholder groups, and not just upon traditional measures like return on investment (ROI), share price, sales volume, profitability, or growth. The strategic alignment model will apply regardless of the specific measure of performance chosen, as long as the measure of performance is one that relies upon the determinants of organizational performance, specified below.

The strategic alignment model has eight variables comprising six dimensions of alignment that contribute to performance. The greater the degree of alignment in each dimension, the greater the overall performance will be.

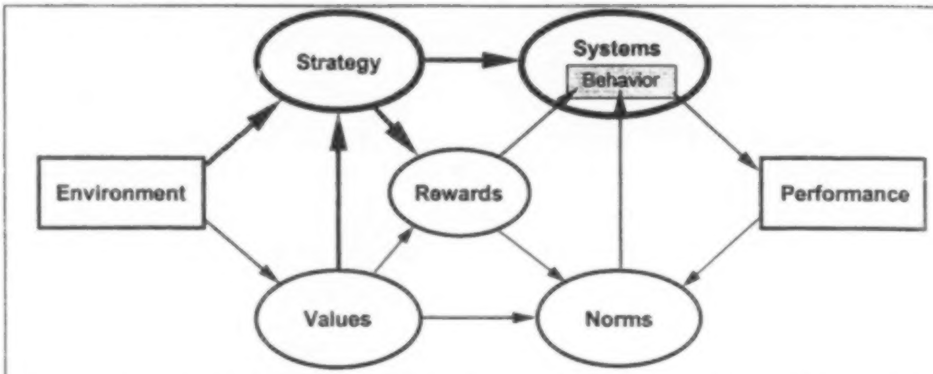

Figure 1. Strategic Alignment Model. The model shows the key variables and their relationships. The relationships that make up the dimensions of alignment are highlighted with bold lines.

Variables

There are eight major variables that pertain to organizational alignment that require definition. These are:

- *Strategy* (independent variable) is the set of rational goal states intended to place the organization in an advantageous position and/or configuration within its environment. Successful strategy depends upon an accurate assessment of internal and external conditions. External opportunities and threats within the organization's environment and internal capabilities and the collective aspirations of the organization provide inputs to strategy. Strategy includes vision, plans, and communication (strategy deployment) at all levels of the organization (Pearce & Robinson, 1994; Wall & Wall, 1995).
- *Values* (independent variable) refer to a set of preferences and judgments concerning what is qualitatively good, bad, desirable, or undesirable. Values are a component of organizational culture and will be shared, in greater or lesser part, by the majority of members of a culture. The culture will transmit values to new members and will maintain a sense of continuity of values over time (Kotter & Heskett, 1992; Schein, 1990).
- *Norms* (independent variable) are informal guidelines for acceptable and unacceptable behavior. They form standards that facilitate interaction between members of a culture, and have a strong influence on the range and frequency of behaviors that members of the culture will display. Norms, like values, are a component of organizational culture and will be shared by the majority of members of a culture and be transmitted over time (Bennett et al., 1994; Schein, 1990).
- *Rewards* (independent variable) comprise the set of policies, procedures, pay and benefits scales, incentive programs, promotion and disciplinary systems, and interpersonal interactions that provide tangible or intangible incentives and disincentives to individual members, groups, and teams within the organization. Rationally designed reward systems are a formal part of the organizational structure that encourages or inhibits specific behaviors (Bechet & Walker, 1993; Britton & Ellis, 1994; Kerr, 1989).
- *Systems* (independent variable) are the structural elements within the organization that move or transform resources (information, matter, energy) to produce desired outputs. The systems variable includes work processes, information systems, financial and administrative control methods, and the structure of the organization. Systems are designed rationally to meet particular goals, but commonly include non-rational components of habit, style, preference, and sub-optimization. Systems represent how resources flow through the organization. Many sub-systems will comprise a typical key organizational process, and the most basic unit of analysis is the individual job. From the smallest filing process to the organizational system as a whole, systems form the rational structure of the organization (Juran, 1992; Rummler & Brache, 1995).

- *Behavior* (mediator variable) is the observable activity of individual and group actors within the organizational system. Any given behavior is directed toward one or more goals of the actor, which may or may not contribute or be intended to contribute to achievement of the strategic goals (Campbell, McCloy, Oppler, and Sager, 1993).
- *Performance* (dependent variable) is the collective output of individual and group behavior in the organization as moderated by the capability of organizational systems. Strategy determines what specific outcomes are to be measured and evaluated as performance. Performance can be represented by the formula (*knowledge x skill x motivation x system capability*) directed toward a specific result (Campbell et al., 1993).

Though not a variable in the alignment model itself, a definition of leadership is important, as the theory suggests that leadership is the means through which the dimensions of alignment may be altered.

- *Leadership* is the combined effort of people at all levels of the organization to encourage and channel the contributions of other organizational members toward desired outcomes. Leadership may be exercised by those with formal or informal leadership roles, and in support of or in opposition to the rationally selected organizational strategy (Davis et al., 1996; Pearce & Robinson, 1994). Leadership's effect on alignment is seen as "the use of interpersonal skills to achieve strategic goals" (McCall, 1993, p. 267).

Dimensions of Alignment

The eight variables of alignment operate on six dimensions. There are two distinct types of alignment dimensions. The elements of two variables may be aligned with each other, producing *between variable* alignment. These dimensions are described by a variable aligned with one other variable. Additionally, several variables are made up of interacting components that may be aligned within the variable. These *within variable* alignment dimensions are described simply by referring to the variable. Overall strategic alignment means that *all* components of the organizational system are cooperating to produce the desired strategic behavior and results.

I. *Alignment of strategy with environmental opportunities* increases the likelihood that the goals selected by the organization will produce the desired performance within the competitive environment while minimizing resource expenditure to do so.
II. *Alignment of systems with strategy* increases efficiency of behavior by removing conflict or friction between systems and work processes and removing systems that detract from efficient strategy-focused behavior.
III. *Alignment of rewards with strategy* increases the likelihood that people will spend their discretionary energy on strategy-focused behavior by providing rational and affective incentive for behaving in ways that support the strategy.
IV. *Alignment of strategy with values* increases the likelihood that organizational members will accept the strategy by selecting goals and tactics that balance environmental and stakeholder imperatives with member values.
V. *Strategy alignment* increases the efficiency of strategic planning and implementation by efficiently linking operational planning and communication efforts to strategic goals.
VI. *Systems alignment* increases the efficiency of goal-oriented behavior by providing efficient linkages between job and group subprocesses that contribute to strategy-focused behavior.

Assumptions

This model of strategic alignment includes several assumptions that define the limits of its applicability. Some of these assumptions also provide logical points to refute the theory. These assumptions are as follows:

- It is not possible to directly change or control the values, norms, and behavior of individuals and groups within an organization.
- The efficiency of organizational behavior is limited by the context of the systems in which it occurs and the discretion of the individual actors within the system.
- Increased goal-directed behavior yields greater performance.

- Effective leadership can increase alignment by influencing the mechanisms that make up the six dimensions of alignment.

The model is intended to include only formal, rational human organizations at the organizational level of analysis. While it may be applicable to virtual, spontaneously forming, or informal organizations, these are beyond the scope of the current theory. The theory may or may not hold at other possible levels of analysis, such the individual, group, community, or industry.

Leadership and Strategic Alignment

The effect of leadership on strategic alignment is indirect but profound. Leadership does not directly affect alignment, but instead affects the variables that make up the dimensions of alignment. According to this model and the research of others in the field (Davis et al., 1996; Kotter, 1996; McCall, 1993), leadership affects alignment through the application of interpersonal skills to coordinate and inspire individual and collective effort toward strategic goals. I note two functions of leadership that can affect an organization's strategic alignment, *structural* and *cultural* leadership.

The coordination of resources and structuring of the organization is a *structural* leadership function. This function affects alignment dimensions I, II, III, and VI through design and control of organizational strategy and systems. Not all researchers agree that this function represents leadership. Kotter (1996) refers to this function as management and distinguishes it from leadership as essentially requiring no inspirational behavior. I disagree in that performing these activities effectively in practice requires a high degree of influence and persuasion skill focused on the organization's strategic goals. By doing the work that aligns strategy and systems, these people are providing leadership that directs and influences the behavior of their fellow employees within the organization.

The inspiration and influence of others' effort is a *cultural* leadership function. This function affects alignment dimensions IV and V by communicating the strategy, the motivational message it carries, and the link between the strategy and the organization's cultural values. This may be the more important function of the two because it convinces people within the organization to adopt the strategic goals as their own, for their own reasons, and unleashes purposeful energy on behalf of the organization that would otherwise be directed elsewhere (Dannemiller & Jacobs, 1992; Quast et al., 1996).

Together, these two functions affect the alignment dimensions by making known the desired outcomes, emplacing incentives and removing barriers, and influencing people to put forth strategy-focused behavior for their own individual reasons. To the degree that leaders perform these functions with a systems perspective in mind, they will be effective in fostering strategic alignment.

Strategic Alignment and Performance

As with the effect of leadership on alignment, the effect of strategic alignment on organizational performance is indirect. Each domain of alignment serves to give an incremental increase in overall efficiency or to focus behavior on strategic goals. The greater the alignment, the greater will be the effect of strategy-focused behavior and, therefore, performance.

Alignment affects performance through its behavioral determinants. Campbell and his partners specified individual performance according to the formula, *"knowledge x skill x motivation = performance"* (Paraphrased, 1993). To represent the organizational context we must add system capability as a factor that can limit or enhance individual performance (Nadler & Tushman, 1989; Rummler & Brache, 1996). Behavior occurs within the context of organizational systems. Taking this into account, the performance determinants become *"knowledge x skill x motivation x system capability = performance."* The dimensions of alignment each affect one or more of the performance determinants as follows:

Strategy ⇒ Environment (Dim. I) affects knowledge,
Systems ⇒ Strategy (Dim. II) affects knowledge, skill, and system capability,
Rewards ⇒ Strategy (Dim. III) affects motivation,

Strategy ⇒ Values (Dim. IV) affects motivation,
Within Strategy ⇕ (Dim. V) affects knowledge, motivation, and system capability, and
Within Systems ⇕ (Dim. VI) affects knowledge, skill, and system capability.

Together, the dimensions of alignment affect the degree of efficiency and effort applied to strategic goals by influencing the performance determinants. Strategic alignment should have an influence any measure of performance to the degree that it relies upon these four determinants.

Summary

The strategic alignment model explains how organizations align or fail to align their components to produce desired performance. Leaders coordinate and influence the strategic, structural, and cultural variables through the six dimensions of alignment. The degree of cooperation and efficient strategy-focused behavior within the context of organizational systems produces performance.

The next challenge for HRD researchers is to construct a way to measure alignment within an organization. Having such a diagnostic tool available would help practitioners focus their efforts and the attentions of organizational leaders on the best "levers" to influence performance. A measurement instrument would also allow researchers to test this model to determine whether the theory really matches with organizational reality. For both purposes, further work on strategic alignment will advance our continually growing understanding of organizational performance.

References

Bechet, T. P., & Walker, J. W. (1993). Aligning staffing with business strategy. *Human Resource Planning, 16*(2), 1-16.

Beer, M., Eisenstat, R. A., & Biggadike, E. R. (1995). Strategic change: A new dimension of human resource management. In G. R. Ferris, S. D. Rosen, & D. T. Barnum (Eds.), *Handbook of human resource management* (pp. 115-138). Cambridge, MA: Blackwell Business Press.

Bennett, R. H., III, Fadil, P. A., & Greenwood, R. T. (1994). Cultural alignment in response to strategic organizational change: New considerations for a change framework. *Journal of Managerial Issues, 6*(4), 474-491.

Britton, P. B., & Ellis, C. M. (1994). Designing and implementing reward programs: Finding a better way. (Aligning Work and Rewards: A Framework for Accelerating Change and Increasing Commitment). *Compensation and Benefits Review, 26*(4), 39-47.

Campbell, J. P., McCloy, R. A., Oppler, S. H., & Sager, C. E. (1993). A theory of performance. In N. Schmitt & W. Borman (Eds.), *Personnel selection in organizations*. San Francisco: Jossey-Bass.

Dannemiller, K. D., & Jacobs, R. W. (1992). Changing the way organizations change: A revolution of common sense. *Journal of Applied Behavioral Science, 28*(4), 480-498.

Davis, B. L., Skube, C. J., Hellervik, L. W., Gebelein, S. H., & Sheard, J. L. (1996). Successful manager's handbook. Minneapolis, MN: Personnel Decisions International.

Galbraith, J. R. (1987). *Organization design*. In E. E. Lorsch (Ed.), *Handbook of organizational* behavior. Englewood Cliffs, NJ: Prentice-Hall.

Gephart, M. A., & Van Buren, M. E. (1996). The power of high performance work systems. *Training & Development, 50*(10), 21-36.

Juran, J. M. (1992). *Juran on quality by design: The new steps for planning quality into goods and services*. New York: The Free Press.

Kerr, S. (1989). On the folly of rewarding A, while hoping for B. In D. A. Nadler, M. L. Tushman, and C. O'Reilly (Eds.), *The management of organizations: Strategies, tactics, analyses* (pp. 165-175). New York: Harper and Row.

Kiefer, C., & Stroh, P. (1984). A new paradigm for developing organizations. In J. D. Adams (Ed.), *Transforming work* (pp. 171-184). Alexandria, VA: Miles River Press.

Kotter, J. P. (1996). *Leading change*. Boston, MA: Harvard Business School Press.

Kotter, J. P., and Heskett, J. L. (1992). *Corporate culture and performance*. New York: The Free Press.

McCall, M. W., Jr. (1993). Developing leadership. In J. R. Galbraith and E. E. Lawler (Eds.), *Organizing for the future: The new logic for managing complex organizations* (pp. 256-284). San Francisco: Jossey-Bass.

Nadler, D. A., & Tushman, M. L. (1989). A model for diagnosing organizational behavior: Applying a congruence perspective. In D. A. Nadler, M. L. Tushman, and C. O'Reilly (Eds.), *The management of organizations: Strategies, tactics, analyses* (pp. 91-106). New York: Harper and Row.

National Institute for Standards and Technology (NIST). (1994). *1995 Malcolm Baldrige National Quality Award application and guidelines*. Alexandria, VA: author.

O'Reilly, C. (1989). Corporations, culture, and commitment: Motivation and social control in organizations. In D. A. Nadler, M. L. Tushman, and C. O'Reilly (Eds.), *The management of organizations: Strategies, tactics, analyses* (pp. 285-303). New York: Harper and Row.

Pasmore, W. A. (1988). *Designing effective organizations: The sociotechnical systems perspective*. New York: John Wilet & Sons.

Pearce, J. A., II, & Robinson, R. B., Jr. (1994). *Strategic management: Formulation, implementation, and control, 5th Edition*. Burr Ridge, IL: Irwin.

Quast, L. N., Hazucha, J. F., & Johnson, C. (1996). The leadership effect. Minneapolis, MN: Personnel Decisions International.

Rummler, G. R. & Brache, A. P. (1995). *Improving performance: How to manage the white space on the organization chart* (2nd ed.). San Francisco: Jossey-Bass.

Schein, E. H. (1990). Organizational culture. *American Psychologist, 45*, 109-119.

Semler, S. W. (1997). Systematic agreement: A theory of organizational alignment. *Human Resource Development Quarterly, 8*(1), 23-40.

Swanson, D. A. (1994). *Analysis for improving performance: Tools for diagnosing organizations and documenting workplace expertise*. San Francisco: Berrett-Koehler.

Tosti, D., & Jackson, S. (April, 1994). Alignment: How it works and why it matters. *Training, 31*, 58-64.

Wall, S. J., & Wall, S. R. (1995). The evolution (not the death) of strategy. *Organizational Dynamics, 24*(2), 7-19.

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The Role of Scenarios in Business Strategy and Human Resource Development

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Continued interest in the Scenario Planning process has prompted further exploration of this methodology the use of scenarios to enhance the strategic planning process. This paper provides a definitional context for scenario and strategic planning and invites HRD scholars and practitioners to explore the use of Scenario Planning as a means to leverage three key roles in strategy formulation and implementation.

Scenario Planning is increasingly gaining critical attention as a powerful methodology associated with strategic planning. However, there is still some confusion, as is typical with newer ideas, about how Scenario Planning can enrich traditional strategic planning (De Geus, 1997; Georgantazas, 1995; Huss & Honton, 1987; Schwartz, 1991; Van der Heijden, 1996; Wack, 1985a & 1985b). Much of the feedback heard at the 1997 AHRD Conference (Miller, Lynham, Provo, St. Claire, 1997) where an introduction to Scenario Planning was featured, as well as in the larger HRD and strategic planning communities, involves curiosity about how these two processes differ, how they might complement one another, and how scenarios as learning and decision-making tools affect traditional strategic planning methodologies. In order to explore these curiosities and add critical theoretical knowledge to the field of HRD, the following discussion will probe deeper into the questions that exist about Scenario Planning and strategic planning. In addition, other core, related methodologies employed in traditional strategic planning, such as forecasting and simulation, will be analyzed in an effort to better identify and articulate specific differences, benefits, and limitations.

Scenario Planning is also a powerful tool that can improve the capability of HRD professionals to fulfill more strategic roles in organizational business planning. During the last few years, there has been increasing discussion about how HRD professionals must be a more integral part of the strategic planning process (Lee, 1997; McLagan, 1989; Torraco & Swanson, 1995). Current forces are shaping a future where the success and survival of today's organizations is increasingly dependent on human development and performance (Pfeffer, 1994; Thurow, 1996). Given this future, the pressure is on for HRD professionals to continue exploring their roles and to master methodologies and tools that ensure their effectiveness in preparing for multiple plausible futures and the creation of organizational strategy.

A 1995 article by Torraco and Swanson proposed two strategic roles of HRD: (a) strategy supporting—"assuring the competence of employees to meet the organization's present performance demands" and (b) strategy shaping—"shaping strategy and enabling organizations to take full advantage of emergent business strategies" (p. 11). These and other authors have proposed a variety of roles that HRD can play in business strategy. Expanding on the work of these previous authors, it is proposed here that HRD can serve *three* critical roles in business strategy: (a) a shaper of strategy (Torracco & Swanson, 1995), (b) an implementor of strategy, and (c) a developer of the human expertise necessary to shape and implement business strategy. Scenario planning can serve as a critical component for enriching these key roles. A second goal of this paper is to more specifically address how Scenario Planning is uniquely positioned to leverage these three key strategic roles and ensure HRD's participation in the strategic conversations and practices of the organization.

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Research Questions

The purpose of this paper is to further delineate Scenario Planning in terms of how it compares and/or connects with strategic planning and how it can affect the role of HRD professionals in the development and execution of organizational strategy. Two specific questions guided the research. They were:

1. What are the differences between traditional methodologies of strategic planning (and related notions such as forecasting, simulation, etc....) and Scenario Planning? How do these differences impact traditional strategic planning?
2. How might Scenario Planning inform and leverage three key roles of HRD professionals (shaper, implementor, and developer) in business strategy processes?

Methodology

The methodology that underlies this paper has consisted of two main components. First, an extensive review of Scenario Planning and strategic planning literature and research from a variety of academic disciplines was conducted, building from past literature reviews with the intent of probing deeper into specific issues rather than providing a breadth about the entire topic of Scenario Planning. This literature was analyzed and synthesized to systematically add knowledge to the field of HRD.

Second, electronic surveys (Borg & Gall, 1989) were conducted with practitioners and academics who are recognized in their respective fields as experts in the area of Scenario Planning. Using the above-mentioned literature review as a basis for the survey design, the purpose of the interviews was to query scholarly experts to address critical issues relating to Scenario Planning. Questions were designed to gather information about various critical issues and two questions, in particular, specifically addressed the research questions stated above. Surveys were conducted over e-mail and/or fax in order to provide the researchers with written responses and minimize error in identifying common themes. Once completed, the researchers conducted a thorough and systematic analysis that involved the identification of essential themes.

Scenario Planning and Strategic Planning: A Comparative Overview

The introduction of newer concepts such as Scenario Planning demands clear articulation of related definitions and meanings. Terms such as 'scenario' and 'scenario planning' have been used in literature for a long time. However, the terms as used here are different from some existing notions and especially those that are typical in common business practice. The following section of this paper discusses key terms associated with this new methodology.

Strategy There is no universally accepted definition of strategy. Traditional views conceived of a strategy as a specific, programmed plan to move an organization from point A to point B. This conception is insufficient when engaging in the process of Scenario Planning. Rather, a conception of strategy that is more aligned with Scenario Planning is that of Mintzberg (1994) who proposes a five form definition of strategy: (a) plan, (b) ploy, (c) pattern, (d) position, and (e) prospective. For our purposes here, a strategy should be thought of as a more dynamic device. Strategy is a

> pattern or plan that integrates an organization's major goals, policies, and action sequences into a cohesive whole...and helps to marshal and allocate an organization's resources into a unique and viable posture based on its relative internal competencies and shortcomings, anticipated changes in the environment, and contingent moves by intelligent opponents. (Quinn, 1988, p.3)

Scenarios Traditionally, scenarios have been understood to be developed cases where one or a very limited number of variables are manipulated and the results identified as alternative situations that organizations may face (Plott & Humphrey, 1996). The Webster's II New

Riverside University Dictionary (1994) defines a scenario as an "an outline of a hypothesized or projected chain of events" (p.1043). Neither of these definitions fully describe the meaning of scenarios in the new methodology of Scenario Planning.

Van der Heijden (1996) defines scenarios "a set of 'stories' about alternative possible futures" (p.7). Rather than simply identifying one or a few key variables to manipulate or arriving at one conception of the future, scenarios take the form of stories or plot lines that allow an organization's members to fully explore an array of possible future events through the identification of (a) major organizational and environmental forces driving change, (b) the interrelationships of these forces, and (c) critical uncertainties in the future environment. Often overwhelming and confusing information is ordered through a process that results in rich narrative plot lines. Scenarios allow organizational members to examine forces which are present in their environment and explore possibilities that exist in an unknown future. They help people recognize more of what is going on around them, including the early, weak signals of change (Kahane, 1996).

Most importantly, scenarios provide a tool "for ordering one's perceptions about the future environments in which decisions might be played out" (Schwartz, 1991, p. 4). They are especially powerful because "they deal with two worlds: the world of facts and the world of perceptions" (Wack, 1985, p. 140). Scenarios guide organizational members in an exploration for facts, but the result is a gathering and transformation of information (or lack thereof) into new perceptions inside the heads of decision makers.

Scenario Planning Scenario Planning is different from traditional strategic planning and other related methodologies. Due to limited space here, Table 1 compares various planning methodologies to the Scenario Planning process (see Miller, Lynham, Provo, St. Claire, 1997 for a full definition), outlining the most pertinent similarities and differences. While strategic planning, business forecasting and simulation are commonly used and understood techniques, it should be noted that this matrix is not a comprehensive table of methodologies.

Table 1. Comparison of Traditional Planning Methodologies to Scenario Planning

Techniques	Purpose of Methodology	Similarities with Scenario Planning	Differences from Scenario Planning
Strategic Planning	**Propose a future course of action by analyzing the past and** **a limited notion of the future environment** (that which is predictable).	• **Both require an analysis** of the present state (i.e. SWOT analysis).	• **Scenarios are not viewed as a forecasted future, but as perception devices assisting in learning and communication.** • **Scenarios focus on ambiguity and critical uncertainties in the environment** which defy prediction.
Business Forecasting	**Summarize strategic outcomes of the planning exercise into a set of possible outcomes** (i.e. best case, worst case, most likely).	• Both require an analysis of the present state. • Both entail an interpretation of future-state trends.	• Strategy development and investment is based on what is considered to be one set of most likely outcomes.
Simulation	**Integrate the use of probability distribution in financial modeling to select the most likely situation** (i.e. @ RISK software, etc…).	• Both require integration of present state analysis. • Both entail a systematic view of predicted future states.	• Attempts to predict the future by determining the set of circumstances that are most likely to be realized.

The three methodologies explored in Table 1 are inadequate to deal with the pace of change that organizations face today and will increasingly need to cope with to remain competitive in the future. In 1994, Mintzberg asserted that strategic planning is not strategic

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thinking and in many cases can spoil it. In his view strategic planning had become strategic programming. Hamel and Prahalad (1994) provide further support to this critique in pointing out that traditional strategic planning processes fail to take into account the creative processes that generate breakthroughs and prompt genuine shifts in strategic direction.

The Scenario Planning Process can address many of the deficiencies identified above by being integrated into an ongoing strategic planning process—in fact, it is a necessity. Torraco (1997) states that "strategic planning is artificial without scenarios" (p. 1). Scenarios "provide a tremendous front-end input to the strategic planning process" (Schriefer, 1995, p. 38). The real value of the Scenario Planning process is its ability to guide organizations through a discussion about complex, uncertain, and emergent futures through a systematic and rational process (Schriefer, 1995). Scenarios also provide richness to planning by integrating a systems perspective, fostering organizational learning, challenging mental models, and enhancing organizational-wide strategic conversation. Galer (1997) stated that scenarios enhance the strategic planning process by "challenging mental models and giving scope for imagination, without threatening the prerogative of managers to take decisions" (p. 1). The methodology stretches the boundaries of possibility and embeds a new way of thinking in the organization. This way of thinking enables organizational members to recognize that a number of plausible futures exist and better equips them to initiate strategies which are robust given these notions of the future. Used in this way Scenario Planning presents "an efficient approach to strategic business planning, focusing on business ideas in an uncertain world" (Van der Heijden, 1996, p.2). It supports a growing interest in stimulating creativity and foresight within organizations.

The key message for those interested in Scenario Planning is that successful scenarios can not be built and used in isolation. The fundamental components of strategic planning, which require an examination of organization mission, vision, strategic goals, and a thorough analysis of the internal and external environment are necessary and can successfully co-exist with a successful Scenario Planning methodology. It must also be noted, and will be further elaborated on in the remainder of this paper, that the successful practice of Scenario Planning requires some fundamental shifts in ways of thinking and acting on the part of decision-makers and leaders in an organization. These shifts have been outlined and presented by way of From-To changes necessary for successful scenario planning and are indicated in Table 2 below.

Table 2. Key From-To Shifts Embedded in Scenario Planning

FROM →	TO
Personal knowledge and individual learning	Institutional knowledge and learning
Driven by a threat of short term impact	Driven by a threat of long term impact
Looking for and responding to big bank signals	Looking for and responding to subtle, smaller signals
Single looped learning	Double looped learning
'Telling the future' to organizational members	Inclusive strategic conversations about the future
Predict-and-control of the future	Anticipation and response to multiple, plausible futures
A single view of the world	Integrated, multiple views of the world
One time development of 'best' strategy	An ongoing strategy process
Planning as a mechanism for reducing risk	Planning as a mechanism for balancing acceptable, calculated risk with unwarranted levels of risk
Belief that seeing further is seeing better	Belief in balanced looking ahead while paying attention to what's happening now
Belief that it is possible and useful to predict the future	Belief that the future cannot be predicted and therefore irreducible uncertainty cannot be ignored
Forecasting done by experts	Involving decision-makers in seeing past outcomes to driving forces that could move the business in various directions
Deciding what is to be forecasted	Allowing multiple plausible futures to emerge from the natural agenda of the environment and decision-makers

Based on the work of Kees van der Heijden, 1996.

HRD Roles and Scenario Planning

Recent discussion has focused heavily on the role of HRD professionals in the strategic planing processes of organizations. While most literature has called for stronger HRD leadership (Nadler & Nadler, 1990; Stacey, 1993; Willis, 1991), there is still relatively little understanding of specific roles and nature of activities required to provide this leadership (Conine, 1997). Expanding the work of Torraco and Swanson (1995), it is proposed that HRD can fulfill three specific strategic roles: (a) a shaper of strategy, (b) an implementor of strategy, and (c) a developer of the human expertise needed to shape and implement strategy. Scenario Planning is a valuable catalyst for these three strategic roles. The following is a brief description of each of these strategic roles together with a short, preliminary description of how Scenario Planning might catalyze and leverage HRD to engage in each of the roles.

HRD as a Shaper of Strategy Torraco and Swanson (1995) consider the role of shaping emergent strategy to be of an influential and important nature. The ability of an organization "to advance from a solid base of proven competence within distinctive market niches to exploit emerging business opportunities in related areas" (p. 15) is at the essence of this shaping role. For an organization to be able to exploit and respond quickly and appropriately to emerging market/business opportunities it is imperative that they have and continue to hold "state-of-the-art employee expertise" (p. 15). HRD must continually push organizations to fully grasp how vital human expertise and capabilities are to their strategic futures. It is this expertise that enables the organization to recognize emerging business opportunity ahead of the game, and to respond to this with nimbleness, flexibility and effectiveness. It is this very nature of Scenario Planning that champions HRD in this role as a shaper of strategy. It does this in a number of ways.

First, Scenario Planning builds organizational muscle and nimbleness and increased capability to recognize signals of business opportunity against the backdrop of an increasingly complex business environment (Van der Heijden, 1996). Organizations of today are faced with the challenge of making smart and robust business choices against a plethora of alternatives, chaos and complexity. The difficulty is no longer one of increasing choices, but rather of how to make the most effective choices in the face of a multiplicity of alternatives, and to do so faster and more effectively than ones' competitors. Scenario Planning helps to build an integrated capability to respond well and enduringly in a continually emerging business environment. It does so by helping the organization realize how the way that they see the world shapes their strategic conversations, and in turn affects strategy formulation and implementation (Van der Heijden, 1996).

Second, through the Scenario Planning process participants and decision-makers are kept alert and open to the risk inherent in strategic planning—the risk of locking on to one future/plan. This tendency was described by Van der Heijden (1996) as the "crisis of perception" (p. 31). Scenario Planning counteracts this crisis by imposing a constant interplay and interaction between the strategy and emergent futures and forces, thereby increasing the chance to respond rapidly, nimbly and enduringly to emergent business environment and opportunities.

Third, through Scenario Planning "multiple plausible futures become a test-bed for policies and plans" (Van der Heijden, 1996, p. 16). Unlike more traditional strategic planning processes, scenarios are not the decision, but merely mechanisms for producing information relevant to decision-making—the latter being evaluated against each scenario. Multiple policies and plans can be pulled through each scenario to test for their robustness to ensure better decisions and projects under a variety of futures.

The active engagement of HRD in the Scenario Planning methodology and the resulting outcomes highlighted above can provide high leverage for HRD to help shape strategy. In order to do this, HRD must further its own knowledge of the business. Torraco (1997) states that

> to be taken seriously, HRD must supplement its professional and technical knowledge (e.g. change, process skills, learning, etc....) with business-related capabilities. Planning and decision-making go hand in hand, but require a fundamental understanding of the business-industry-organization-environment context. HRD can add tremendous value to scenario planning...but only if it is invited (or proactive enough) to engage in planning. (p. 2)

If HRD can achieve this charge, it will help organizations shape strategies that can optimize human potential and emerging business opportunities. Scenario Planning can become a vital technique for enabling HRD to become actively involved in the shaping of strategy in organizations.

HRD as an Implementor of Strategy It has been asserted that HRD has the potential to increasingly contribute to an organization's performance. In order to do this, HRD must continue to expand its notions of where and what it can do. Scenario Planning provides a vehicle for HRD to become intimately involved in the strategic processes of the organization by engaging in a number of key activities.

First, Scenario Planning demands intense buy-in and commitment to systems theory/thinking as well as to the implementation of the principles and essences of the learning organization. HRD can use its theoretical understanding of these areas to foster this fundamental reorientation in the organization and its individual members.

A second key contribution of HRD can be in its ability to help build a shared language for understanding and anticipating emerging business environments. A shared language is a direct result of effective processes of organizational conversation that allow for multiple perspectives to be compared, challenged, and negotiated. Galer (1997) supports this in stating, "HRD people can have a useful role in facilitating strategic conversation" (p. 1). HRD's knowledge of group processes and human development facilitate this kind of conversation-building. It also helps to ensure that the core business idea of an organization is clearly and jointly articulated and understood. It is vital that HRD plays a value-free role—suspending their own agendas and perspectives and facilitating frameworks that will allow shared meaning and understanding to emerge.

Third, but equally important as the contribution stated above, is the need to create and maintain networks where knowledge and learning is transferred out of the hands of experts and into the mainstream of the organization. Lee (1997) discusses the key role that HRD can play in examining the processes that underlie human interaction, development, and organization. Networks are more than serendipitous occurrences. HRD can proactively create structures and mechanisms for purposeful, networked relations throughout the organization. These and other people-processes are key in the successful implementation of the Scenario Planning methodology. They ensure that "the process of strategic conversation is embedded in the organizational mechanisms" (Van der Heijden, 1996, p. iii).

Finally, HRD can, of course, contribute through its ability to facilitate the steps and activities involved in the actual Scenario Planning methodology. Effective facilitation entails demystifying Scenario Planning and making it increasingly explicit and accessible to multiple organizational members. Extending this facilitator expertise even further, HRD must also play a vital role in holding decision-makers true to the methodology. This will ensure that the strengths of Scenario Planning and strategic planning are combined into a powerful learning and decision-making tool for the organization.

HRD as a Developer of Human Expertise

Thinking: Developing Expertise to Foster a Strategic Perspective. Scenario Planning demands that HRD broaden its notion of development of human expertise and even more fully realize the potential of its human resources. First, Scenario Planning, ultimately, is a process that requires intense participation from individuals. For many individuals involved, the process demands a new way of understanding and perceiving the organization and business environment. HRD will need to increasingly develop new cognitive, perceptive, and strategic-thinking skill sets. Rather than simply assigning responsibilities for implementing strategy, HRD can help expand the organization's capacity to leverage the potential of its human resources for the planning process itself.

Second, it is important to recognize that Scenario Planning is based on an integrative learning model (Van der Heijden, 1996)—a model that promotes (a) action paired with learning (double-loop) and (b) behavior as a living system capable of constant adjustment and reorganization. HRD can be a catalyst in organizations for adopting the kind of learning culture that is required. Organizations will "need to build up related capabilities for perception, reflection, the development of theories about the environment, and joint action" (Van der Heijden, 1996, p. 40).

Third, Scenario Planning fosters on-going conversations about the future—conversations that involve multiple people and perspectives. Rather than "telling the future", these conversations require a language and structure that bridge this inherent diversity. HRD is uniquely positioned to develop processes and interventions that cultivate this language and structure. Without these critical components, organizations cannot effectively engage in Scenario Planning.

Acting: Developing Expertise to Implement Strategy. Traditional strategic planning methodologies have resulted in one plan developed by 'experts' that was then rolled-out to the rest of the organization in the hope of coordinated action towards a predetermined goal. Scenario Planning requires very different implementation behavior from organizational members. The premise underlying Scenario Planning is institutional learning that integrates individuals, groups, and the processes in which they work (Van der Merwe, 1997)—ensuring that all members of the organization are "rolled-into" continuous learning. This premise is rooted in shared and integrated mental models of plausible futures. The result is coordinated, joint action that is fundamentally different from what most organizations have experienced before.

Rather than working towards one plan, individuals engage in a process of keeping alert to emergent business signals and opportunities. They learn to look deeper at what comes at the organization—interpreting the signals/events in terms of how they impact the larger system and structure. This builds causal rather than probabilistic thinking. This new way of thinking equips individuals/groups to continually adjust and realign their priorities and actions. In this way, planning, action, and learning become a continuous, interactive cycle (De Gues, 1997). The theoretical knowledge inherent in HRD can ensure the development and practice of this cycle.

Conclusion

The work of this paper makes a contribution to the field of HRD by detailing how the Scenario Planning methodology can enrich the decision making capabilities of organizational leaders. This work has described the process and benefits of incorporating Scenario Planning into the strategy process—an issue of critical concern and importance when futures are uncertain, unpredictable and increasingly ambiguous. The Scenario Planning process analyzed and discussed in this paper offers opportunity for linking practices of organizational learning directly with organizational performance. Forging such organizational links will add value to the broader business application and integration of the Scenario Planning methodology and to the role that HRD can play in the shaping, supporting and implementing business strategy. The critical need for HRD to engage in this endeavor is underscored by Torraco (1997) when he asserts that "while the strategic importance of HRD is frequently acknowledged, the field has had little in the way of real strategic value to date" (p. 2).

In an era where human resources and expertise are clearly becoming a critical source of sustainable competitive advantage (Pfeffer, 1994), the commitment to ongoing capability development takes on a strategic importance. This emerging reality affords the unique opportunity for HRD to play at least three core strategic roles (shaper, implementor, and developer) in building a reservoir of capabilities and potentialities within organizations. The leverage to step up to this role—to begin to think, act and impact strategically within organizations—can be greatly enhanced through the active engagement and mastery of the

Scenario Planning methodology. How this and similar processes can add value to the core business of an organization is another challenge to HRD, and one well worth consideration in the future.

References

Borg, W. R., & Gall, M. D. (1989). Educational research: An introduction (5th ed.). White Plains, NY: Longman.

Conine, C. T., Jr. (1997). The integration of human resource development into the strategic planning process: A comparative case study of three corporations. In R. J. Torraco (Ed.), Academy of Human Resource Development (pp. 100-107). Baton Rouge, LA: AHRD.

De Geus, A. (1997). The living company: Habits for survival in a turbulent business environment. Boston, MA: Harvard Business School.

Galer, G. (electronic survey interview, December 10, 1997).

Georgantzas, N. C., & Acar, W. (1995). Scenario-driven planning: Learning to manage strategic uncertainty. Westport, CT: Quorum Books.

Huss, W. R., & Honton, E. J. (1987). Scenario planning: What style should you use? Long Range Planning, 20 (4), 21-29.

Kahane, A. (1996). Scenarios for energy: Sustainable world vs global mercantilism. In L. van der Merwe, Scenario thinking readings. Johannesburg: R.S.A. Center for Innovative Leadership.

Lee, M. M. (1997). Strategic human resource development: A conceptual exploration. In R. J. Torraco (Ed.), Academy of Human Resource Development (pp. 92-99). Baton Rouge, LA: AHRD.

McLagan, P. (1989). Pushing the frontiers: Implications for human resource development. In D. Gradous (Ed.), Systems theory applied to human resource development (pp. 83-90). Alexandria, VA: American Society for Training and Development.

Miller. R. F., Lynham, S. A., Provo, J., St. Claire, J. M. (1997). Examination of the use of scenarios as learning and decisions-making tools for human resource development. In E.F. Holton, III (Ed.), Academy of Human Resource Development (pp. 79-86). Baton Rouge, LA: AHRD.

Mintzberg, H. (1994). The fall and rise of strategic planning. Harvard Business Review, 72 (1), 107-114.

Nadler L., & Nadler, Z. (Eds.). (1990). The handbook of human resource development, (2nd. ed.). New York: John Wiley & Sons.

Pfeffer, J. (1994). Competitive advantage through people: Unleashing the power of the work force. Boston: Harvard Business School Press.

Plott, C. E., & Humphrey, J. (1996). Preparing for 2020. Training & Development, 50 (11), 46-49.

Quinn, J. B. (1988). In J. B. Quinn, H. Mintzerg, R. M. James. The strategy process: Concepts, contexts, & cases. Englewood Cliffs, NJ: Prentice Hall.

Schoemaker, P. J. H. (1995). Scenario planning: A tool for strategic thinking. Sloan Management Review, 37 (2), 25-40.

Schriefer, A. E. (1995). Getting the most out of scenarios: Some questions and answers. Planning Review, 23 (6), 37-40.

Schwartz, P. (1995). The art of the long view: Planning for the future in an uncertain world. New York: Currency Doubleday.

Stacey, R. D. (1993). Strategic management and organizational dynamics. London: Pitman.

Thurow, L. C. (1996). The future of capitalism: How today's economic forces shape tomorrow's world. New York: William Morrow and Company.

Torraco, R. J. (electronic survey interview, December 1, 1997).

Torraco, R. J., & Swanson, R. A. (1995). The strategic roles of human resource development. Human Resource Planning, 18(4), 11-21.

Van der Heijden, K. (1996). Scenarios: The art of strategic conversation. Chichester: John Wiley & Sons.

Van Der Merwe, L. (personal communication, March 6, 1997).

Wack, P. (1985a). Scenarios: Uncharted waters ahead. Harvard Business Review, 63 (5), 73-89.

Wack, P. (1985b). Scenarios: Shooting the rapids. Harvard Business Review, 63 (6), 139-150.

Webster's II New Riverside University Dictionary (1994). Boston: The Riverside.

Willis, V. J. (1991). The new learning organization: Should there be a chief learning officer in the house? Human Resource Development Quarterly, 2, 181-187.

Strategic HRD aligning and HRD effectiveness

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This study examines the relationship between strategic HRD aligning and HRD effectiveness in companies. Stakeholders of two types of HRD programs (automation and social skills), and from companies in two economic sectors (industry, and financial and commercial services) were asked to complete a questionnaire. Variables include among others the actual performed strategic HRD aligning and its perceived quality, and the effects and effectiveness of selected HRD programs. Results from one stakeholder group, namely HRD participants, are reported. For this group the hypothesized relationship that increased quality of strategic HRD aligning leads to increased effectiveness of HRD programs is confirmed. The size of the effects of the effect of strategic aligning on effectiveness, however depends on the economic sector and type of HRD program.

The survey reported here is part of the 'Strategic HRD' project in which the effects of strategic HRD in companies are studied. Strategic HRD is defined as the process of assessing organizational strategies, problems and developments in order to find important HRD needs and to provide HRD programs that address these needs. To be strategic, these programs need to provide employees with the competencies needed to improve their work performance so that they can contribute to the achievement of important organizational goals (Bergenhenegouwen, Mooijman & Tillema, 1990; Torraco, 1995). A central issue is the strategic aligning of HRD to the company's situation, which means that HRD programs have to be closely linked to this to provide employees with the right competencies at the right time (Torraco, 1995). Strategic HRD aligning refers to the interrelationship between HRD representatives and relevant company officials at the various levels of the organization, the so-called HRD stakeholders. This paper focuses on the impact of strategic aligning on the effectiveness of corporate HRD programs, from the perspectives of one stakeholder group, namely the HRD participants.

Theoretical Framework

This study fits within a framework of literature on strategic HRD and HRD effectiveness, and is also related to theories based on the systemic approach. Literature and research reveals that to be strategic and effective, HRD needs to be strongly aligned to the company's situation and the real training needs of relevant stakeholders (Torraco, 1995; Wognum, 1995). Strategic HRD aligning is a key concept of HRD policy making, which is the process of determining the HRD goals and strategies in organizations by examining organizational strategies, problems and developments (further referred to as 'problem'). The systemic theories plea for more vertical integration between HRD policy processes at the strategic, tactical and operational levels of the company (Banathy, 1991; Rummler & Brache, 1995; Swanson, 1994). HRD policy making at the strategic level has to be translated into tactical and operational levels to achieve HRD effectiveness. Research indicates a limited practice of this kind of policy integration within companies (Wognum, 1995; Wognum & Mulder, 1997). An important question concerns the way of performing HRD aligning processes. These kind of processes lead to agreements on the deployment of HRD programs at the organizational level and the implementation of these programs at the functional level of organizations. Several dimensions are to be distinguished in this concept of strategic HRD aligning. One of those concerns *participation*, meaning the participants at the various

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organizational levels involved in strategic HRD aligning. Theoretically, optimal strategic policy making should take place at the strategic, tactical as well as the operational level in organizations, with the involvement of relevant stakeholders at each level. A second dimension concerns the *information* needed to get more insight in the 'problem' and related HRD needs, to be able to decide which HRD goals and objectives are important to align HRD programs to the company. A third dimension concerns the *nature of the aligning procedure*, which refers to the more or less formal consultative structures and information gathering procedures in the aligning process. The fourth dimension, *decision making*, points to the process of setting HRD goals and objectives for the HRD programs. The results of earlier performed case study research (Wognum, 1994, 1995) indicate strategic HRD aligning as a necessary condition to a meaningful evaluation of HRD effectiveness. As a follow up of the case studies, the present large-scale empirical research is conducted to study the potential effects of strategic HRD aligning on the effectiveness of HRD programs. *Effectiveness* is then conceived as: the extent to which the HRD goals and objectives (the planned results) are reached. In order to define the level of HRD effectiveness, *HRD effects* can be measured at the following levels: the learning level (effects on knowledge, skills and attitudes), the behavior level (effects on job performances of individual employees), and the results level (effects on the performances of groups, departments or the company).

Research questions and hypothesis. In the study presented two things are important. First: gaining an insight into strategic HRD aligning and HRD effectiveness in companies. The research questions thus are: 1. To what extent has strategic HRD aligning taken place in companies? 2. Does strategic aligning vary for different types of companies (industry or financial/commercial services) and different types of HRD programs (automation or social skills) 3. To what extent are HRD programs perceived as effective? Second: exploring the relationship between both. The hypothesis then is: 4. *Increased quality of strategic HRD aligning leads to increased effectiveness of HRD programs*. As an extra exploratory research question we moreover add: 5. Do the (potential) effects of strategic HRD aligning on HRD effectiveness vary for different types of companies (industrial or financial/commercial) and for different types of HRD programs (automation or social skills).

Methods

The survey reported here was carried out as part of a larger survey among companies in the Netherlands with more than 500 employees. These companies were selected from a national database and belonged to various economic sectors. The present study has started from the group of companies that was already studied in an earlier part of the larger research project (Wognum & Mulder, 1997).

Sample. Companies were selected from the aforementioned research group of 107 companies (64 from the industrial sector and 43 from the financial and commercial services sector). Selection criteria were, among others: 1. Training is provided for two or more groups of employees, each group working on another level in the organizational hierarchy, and training concerns two kinds of frequently recurring fields of HRD activities (i.e. automation and social skills; 2. The company has already provided a specific HRD program in the field of automation or social skills. This program had to be completed in 1996, in order to be able to assess potential effects. Thus 88 companies were selected, 43 companies with HRD programs in the field of automation and 45 with programs for social skills development. In the end, 23 companies with HRD programs in the field of automation and 21 companies in the field of social skills development agreed to participate in the study. Analyses showed no systematic non-response bias. Within the companies, four categories of respondents were selected, the HRD company representative, a maximum of 15 participants of selected HRD programs, their supervising manager, and (if present) their subordinate. All groups can be considered as important stakeholders in strategic HRD. The first mentioned selection criterion was important to enlarge the number of possible respondents.

Data collection. Data were collected in the spring and summer of 1997, by means of four comparable questionnaires sent to the aforementioned four groups of respondents. In order to improve the response rate, the questionnaires were delivered personally to the HRD official in each studied company. The other respondents were selected at random and the questionnaires for each group were sent by the company's internal mail transport. In this paper only the results of the group of HRD participants are object of study.

The four questionnaires were designed to collect information on variables derived from the aforementioned theoretical framework and comprises groups of questions and statements. The questions had precoded and some open answers, and were related to the four dimensions of strategic HRD aligning, i.e. participation (in problem analysis and problem solution), information (on several information categories), the more or less formal nature of consultative structures and information gathering procedures in strategic HRD aligning, and the decision making process of setting HRD goals and objectives. The statements concern opinions of respondents on, among others, the quality of the strategic HRD aligning process (in total 22 statements of which five on participation, five on information, five on the formal nature, and seven on the decision making process), and the perceived HRD effectiveness (10 statements). The statements (items) had answers on a 5 point scale, running from 1 (totally disagree/not at all) to 5 (totally agree/completely) and a possible score 6 (for unknown, no idea, or not relevant).

Response. For the automation response group a total set of 752 questionnaires was sent out (to 23 HRD company representatives, 320 trainees, 277 managers, 132 subordinates). For the 'social skills' response group a set of 740 questionnaires was sent out (to 21 HRD company representatives, 292 trainees, 251 managers, 176 subordinates). For the group of companies with social skill programs, all 21 HRD company representatives filled in the questionnaire, the response rates for the other groups of respondents are 63% of the trainees, 49% managers, 49% subordinates. For the group of companies with automation programs, all 23 HRD company representatives filled in the questionnaire, 54% of the trainees, 43% of the managers, and 29% of the subordinates. The group of HRD participants, which is object of study in this paper, has a sample size of 357. The sample size of the companies in this study is 44.

Analysis. To arrive at answers to the research questions the analysis is straightforward where descriptive statistics, cross-tabulations, chi-square analysis and one-way analysis of variance suffice. Confirmative factor analysis with varimax rotation (with .40 being used as the minimum factor-loading level) and reliability analysis (with .30 being used as the minimum item-rest correlation) were used to identify the presence of the four dimensions of strategic aligning, and to construct the opinion scales. These scales are based on the items concerning the perceived quality of strategic aligning, and the effectiveness of HRD programs. The scales were used to examine the focal question "does strategic aligning increase the effectiveness of HRD". In answering this focal question, we face two problems. The first is that respondents may avoid cognitive dissonance: it is not very likely that they will rate a course as effective while at the same time they rate the strategic aligning process as qualitatively poor. The second problem is that a two-stage sampling design is employed (first a sample of companies, then within each company a sample of respondents) resulting in a clustered data-structure. We turned the second problem into our advantage by using multilevel statistical models, which allows us at the same time to handle the first problem.

Multilevel statistical models (cf. Goldstein, 1995) are suited for handling data with a hierarchical, nested structure. These models allow us to make statistical inferences both at the level of respondents (the sample size of which is 357) and at the level of companies (the sample size of which is 44). Using these models it is possible to distinguish between within and between company relationships between variables. In the case of the present study we constructed on the basis of the perceived quality of the strategic aligning process an aggregated measure for each company (the mean of the individual scores). We then calculated individual deviation scores per company by subtracting from the original individual score the company mean. By regressing the effectiveness score both on the individual deviation score for strategic aligning and on the company mean for strategic aligning we are in a position to cope with the problem of respondents avoiding cognitive dissonance: if avoiding cognitive dissonance affects the estimate of the association between strategic aligning and effectiveness then this relates to the within company regression coefficient, but not the degree that the between company regression coefficient exceeds this within company regression coefficient.

Refraining from intercept and residual terms the statistical model looks like

$$\mathrm{Eff}_{ij}=\beta_1(\mathrm{SA}_{ij}-\mathrm{SA}_{.j})+\beta_2\mathrm{SA}_{.j}+(...) \quad (1)$$

In words: the effectiveness score of respondent i in company j is regressed on the mean for company j for strategic aligning ($\mathrm{SA}_{.j}$) with regression coefficient β_2, and the position within company j that a respondent i has on the strategic aligning scale ($\mathrm{SA}_{ij}-\mathrm{SA}_{.j}$). If we reshuffle model (1) somewhat we see that this model is equivalent to:

$$\mathrm{Eff}_{ij}=\beta_1\mathrm{SA}_{ij}+(\beta_2-\beta_1)\mathrm{SA}_{.j}+(...) \quad (2)$$

There is no psychological explanation for $\beta_2-\beta_1$ to be greater than zero: why should there be an extra effect of the mean strategic aligning score over and above the effect of the individual score on strategic aligning on the effectiveness score? For the individual level effect the psychological explanation of avoiding cognitive dissonance may hold, but not for this -so called- contextual effect. Therefore $\beta_2-\beta_1$ gives a 'hard' answer with respect to the focal research question.

With respect to the additional questions whether the relation between strategic aligning and effectiveness may differ between economic sectors (industry vs financial/commercial services) and/or between types of HRD programs (social skills vs automation) we simply adapt the analysis strategy by including the appropriate interaction effects in the multilevel regression model.

Results

Actual Strategic HRD aligning. - Tables 1 up to 4 inclusive present the actual participation, information, nature of aligning procedure, and decision making, which are perceived as the four dimensions of strategic HRD aligning.

Actual participation. Table 1 indicates that 35% of the responding HRD participants were involved in the analysis of the problem that served as the main reason for starting the selected HRD program, while 29.5% of the respondents participated in the problem solution process. Significant differences in actual participation, using a Chi-square test, were found in favour of social skills programs. Although 62.5% of the respondents were not involved in problem analysis and/or problem solution, 55.5% of the respondents think that that participation in problem analysis or problem solution is important, and 20.4% think it even to be very important. This importance was measured on a 5 point scale, running from 1(very unimportant) to 5 (very important) (M= 3.87; SD= .86). Participants in social skills programs indicate participation as more important (M=4.07, SD=.76) than participants in automation programs (M=3.65, SD=.91) (p=.000), and they are also more times involved in strategic HRD aligning (M=.83, SD=.91) than participants in automation programs (M=.42, SD=.77) (p=.000).

Table 1: percentages, means and standard deviations of involvement in participation in strategic HRD aligning, and differences per economic sector of companies and type of HRD programs (only the significant differences are reported)

				differences for	
variables	*%*	*M*	*SD*	*sector*	*type of program*
participation in problem analysis	35.0				*** +
participation in problem solution	29.5				*** +
importance of participation		3.87	.86		*** +
number of participation times		.64	.87		*** +

N=357 ***: $p< .001$

+: significant difference in favour of social skills programs

Actual information. Table 2 presents the results on the information dimension of strategic HRD aligning. Information is provided by 38.6% of the respondents on various information subjects. Most information is provided on the knowledge, skills and attitudes of the HRD participants (18.3% of the respondents), followed by information on the working procedures of the teams to which respondents belong (13.5%), and respondents' jobs or tasks (12,3%). Although respondents indicate the importance of providing some information in the aligning procedure (M= 3.84, SD = .86), they had not substantially provided information on one or more information categories (M= .59, SD = 1.04). Significant differences were found in favour of social skills programs where providing information was seen as more important (M= 3.93, SD= .80) than in the case of automation programs (M= 3.74, SD= .91) (p= .04), and with more information categories (concerning respondents' jobs/tasks, or the working procedures or policy of the teams to which respondents belong) (M= .79, SD=1.24) than in automation programs (M= .37, SD= .69) (p= .000). The importance was measured on a 5 point scale, running from 1 (very unimportant) to 5 (very important).

Table 2: percentages, means and standard deviations of providing information in strategic HRD aligning, and differences per economic sector of companies and type of HRD programs (only the significant differences are reported)

				differences for	
variables	*%*	*M*	*SD*	*sector*	*type of program*
providing information	38.6				*** +
on my knowledge, skills, attitudes	18.3				* +
on my job/tasks	12.3				* +
on my team's working procedures	13.5				* +
on my team's results	2.0				
on my team's policy	5.7				** +
on processes of my company	4.9				
on results of my company	-.-				
on the policy of my company	1.7				
on company external affairs	0.3				
on other affairs	1.7				
importance of providing information		3.84	.86		* +
number of provided inform. Categories		.59	1.04		*** +

N=357 *: p<.05 **: p<.005 ***: p< .001

+: significant difference in favour of social skills programs

Actual nature of aligning procedure. In Table 3, information on the actual consultative structures and information gathering procedures is presented, indicating the more or less formal nature of the strategic aligning process. The table reports that strategic aligning has taken place in formal meetings (14.2%), as well as in more informal structures like corridor chats (14.5%). In only 8.7% of the cases a specific structure (e.g. project group or sounding board) was installed in order to consider the problem that served as the main reason for starting the selected HRD program. Significant differences in favour of social skills programs were found for formal and temporary consultative structures, which indicate a more structured aligning procedure for this type of HRD programs. However, 51.4% of the respondents were not involved in any consultative structure, and this was significantly more the case for automation programs than for social skills programs. Respondents of social skills programs were significantly more involved in consultative procedures (m=.61, SD= .53) than in the case of automation programs (M= .40, SD= .53) (p= .000). The same was the case with the number of applied information gathering procedures where for social skills M= .81 (SD=.92) and for automation M= .48 (SD= .59) with p= .000. Table 3 reports that 44.9% of the respondents did not gathered any information to clarify or explain the problem that served as the main reason for starting the selected HRD program. Most of the information gathered by respondents concerned their own job and tasks (23.3%) and this was significant more the case in the industrial sector than in the sector of financial and commercial services. In the aligning procedure for social skills programs significantly more information was gathered by looking at the results of the teams respondents belong to, and by applying various information gathering techniques (e.g. SWOT-analysis, environmental scanning, trend analysis), than for automation programs.

Table 3: percentages, means and standard deviations of involvement in consultation structures and information gathering procedures in strategic HRD aligning, and differences per economic sector of companies and type of HRD programs (only the significant differences are reported)

				differences for	
variables	*%*	*M*	*SD*	*sector*	*type of program*
involvement in consultative structures					
not involved	51.4				**-
in a formal/regular meeting	14.2				**+
in a temporary consult. structure	8.7				*+
in informal consult. structure	14.5				
in other kinds of consult. structures	15.0				**+
information gathering procedures					
no information gathering	44.9				**-
involved in a test / other evaluation procedure	6.4			*--	
looking at own tasks/job	23.3			*--	
looking at my team's working procedures	17.5				
looking at my team's results	5.0				***+
applying inf. gathering techniques	3.2				**+
looking at documents like policy plans	5.2				
other information gathering procedures	7.0				
number of consultative structures involved		0.51	.59		**+
number of inf. gathering procedures applied		.65	.79		***+

N=357 *: p<.05 **: p<.005 ***: p< .001

+: significant difference in favour of social skills programs

-: significant difference in favour of automation programs

--: significant difference in favour of the industrial sector

Actual decision making. Table 4 reports the cases in which the HRD goals and objectives are formulated, as result of the strategic aligning process. These goals and objectives are important for the development and/or selection of HRD programs that provide employees with the competencies needed. In only 9.2% of the cases no specific goals and objectives were formulated, but this was more the case in the industrial sector than in the sector of financial and commercial services. Most goals and objectives were formulated on individual knowledge, skills and attitudes of participants at the end of the course (67.9%). Goals on individual work performance at the end of the program, and results on individual, team and company level, were less formulated (respective 6.6%, 7.8%, 12.4% and 3.8 %), although work performance and work results were significantly more important for social skills programs than for automation programs.

Table 4: percentages, means and standard deviations of decision making in strategic HRD aligning, and differences per economic sector of companies and type of HRD programs (only the significant differences are reported)

				differences for	
variables	*%*	*M*	*SD*	*sector*	*type of program*
goals and objectives to achieve					
no specific goals and objectives	9.2			*--	
knowledge, skills, attitudes at end of program	67.9				
own work performance at end of program	6.6				*+
own work results at end of program	7.8				*+
team results some period after program	12.4				
company results some period after program	3.8				
other goals/objectives	5.8				
number of defined goal levels		1.01	.59		

N=357 *: p<.05

+: significant difference in favour of social skills programs

--: significant difference in favour of the industrial sector

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Opinion scales. Two opinion scales were constructed, concerning 'Quality of strategic HRD aligning', and 'Effectiveness of HRD programs'.

Quality of strategic HRD aligning. The 22 items of strategic aligning were subjected to a factor-analysis in order to assess the construct validity of strategic aligning (i.e. participation, information, nature, decision making). Instead of the expected four factors, six factors emerged from the factor analysis with varimax rotation. Interpretation showed that the factors went across the four dimensions of strategic aligning. Then a one-factor analysis was performed to find out whether the construct of strategic aligning is one-dimensional in stead of more-dimensional. Five items with factor loadings below .40 and with item-rest correlations below .30 were dropped for further analysis. Reliability analysis of the remaining 17 items of the opinion scale 'perceived quality of strategic HRD aligning' leads to an alpha of .89. Analysis of the item content proved that all four dimensions of strategic HRD aligning were represented in the constructed scale. The grand mean of the 17 items is 3.39 (SD = .68) concerning 252 valid cases. No significant difference for the quality of strategic aligning were found for economic sector and type of HRD programs.

Effectiveness of HRD programs. Reliability analysis resulted in excluding one item, because of negative item-rest correlation. The alpha of the remaining 9 items is .90. A one-factor analysis showed that none of these items had a factor loading < .40. No significant differences for economic sector and type of HRD programs were found. The grand mean of the 9 items is 3.43 (SD= .72) concerning 265 valid cases.

Opinion scales and actual strategic aligning. Pearson correlation coefficients were estimated to gain insight into the association between the opinion scales 'quality of strategic HRD aligning' and 'effectiveness of HRD programs' and the sum variables which indicate the number of participation times that respondents were involved in strategic aligning, the provided information categories, involved consultative structures, applied information gathering procedures, and defined goal levels. The correlations show consistent statistical significance of the 'quality of strategic aligning' scale with participation times ($p < .001$), information categories ($p < .001$), consultative structures ($p < .001$), information gathering procedures ($p < .001$) and goal levels ($p < .05$). This means, for instance, that the more the HRD participants are involved in strategic aligning, the better their opinion is on the quality of HRD aligning. For the effectiveness scale, no significant relationship is found.

Strategic aligning and HRD effectiveness. In answering the focal question of the impact of strategic HRD aligning on the effectiveness of HRD programs we have to consider the representativeness of the scale 'perceived quality of strategic aligning'. This scale is based on 17 items and 252 valid cases. A number of 105 cases is not included, due to too much item-non-response. Analysis showed that the results based on the 252 cases are representative. Respondents whose opinion on the quality of strategic aligning is included in the analysis do not significantly differ in their opinion on HRD effectiveness (M=3.42, SD=.78) from those who are not included in the strategic aligning scale (M=3.43, SD=.71).

Following the research strategy, as outlined in the above section, the results of the multilevel model analyses are summarized in Table 5.

The results under model 0 indicate that the average perceived effectiveness score is 3.42, with a total variance of .495 (.093 plus .402) of which 19% ((.093/.495)*100%) is variation between companies and 81% is variation between respondents within companies. The results under model 1 indicate that strategic aligning has an effect of .44 on effectiveness within companies and that the between companies effect of strategic aligning is .68, which is considerable higher than .44. Strategic aligning accounts for 25% of the variation in effectiveness scores. The results under model 2 indicate that the effect of strategic aligning on the effectiveness of corporate HRD differs between the two economic sectors. For industry companies the within company effect of strategic aligning on effectiveness is .36, whereas the between company effect is .17 higher. For companies in the sector of financial and commercial services, however, both effects are substantially higher: .60 (.36+.24) within and 1.36 (.53+.83) between companies. The latter effect exceeds the former by .76 points. Under model 3 the results indicate that a similar phenomenon occurs for the two types of corporate training programs considered in this study. For automation programs the effect of strategic aligning on effectiveness is .51 within and .98 between companies. For social skills programs, however, the effects are .39 and .36 respectively. The latter indicates that for social skills there is no extra effect of the company average for strategic aligning on effectiveness.

Table 5: Results of the multilevel model analyses on strategic aligning and effectiveness (standard errors between brackets)

	Strategic aligning and effectiveness							
	model 0		**model 1**		**model 2**		**model 3**	
intercept	3.42	(.07)	1.15	(.45)	1.66	(.48)	.21	(.54)
SA_{ij}-$SA_{.j}$			.44	(.07)	.36	(.09)	.51	(.11)
$SA_{.j}$			.68	(.13)	.53	(.14)	.98	(.16)
indust. vs financ./commerc. (IF_j)					-2.94	(1.16)		
automation vs social skills (As_j)							2.02	(.81)
IF_j*(SA_{ij}-$SA_{.j}$)					.24	(.16)		
IF_j*$SA_{.j}$					.83	(.33)		
AS_j*(SA_{ij}-$SA_{.j}$)							-.12	(.15)
AS_j*$SA_{.j}$							-.63	(.24)
variance								
between companies	.093	(.04)	.045	(.03)	.036	(.02)	.018	(.02)
within companies	.402	(.05)	.325	(.04)	.315	(.04)	.330	(.04)
R^2	-		25%		29%		30%	

Conclusion and discussion

The findings give more insight into actual strategic HRD aligning, which has preceded the performance of the selected HRD program in the companies studied. An overall conclusion may be that the aligning procedure in the case of social skills programs is more intensive, structured and integrated than in the case of automation programs. More HRD participants are involved in strategic aligning, information is based on various subjects and organizational levels, information gathering procedures (like SWOT-analysis and environmental scanning) are applied more often, and HRD goals and objectives are formulated at more levels. It is conceivable that the aligning procedure in automation programs will hinder the detection of the real HRD needs of all stakeholders in the company, and the providing of HRD programs that address this needs. The perceived effectiveness of the automation programs, however is as high as of the social skills programs. But at the other hand is was found that the quality of the aligning procedure a far more profound effect for automation than for social skills programs.

A positive effect of the quality of strategic aligning on perceived HRD effectiveness could be demonstrated. The alternative explanation for this effect, namely that respondents are inclined to avoid cognitive dissonance, could be rejected by the finding, that there was an extra effect of the company mean for strategic aligning on perceived effectiveness of HRD programs over and above the individual effects. A difference is found between the two economic sectors. For companies in the sector of financial and commercial services, the effects of strategic aligning on HRD effectiveness are even stronger than for industry companies. A difference is also found between the type of HRD programs, mainly for the effects between companies. For automation programs an extra effect of the company average for strategic aligning on effectiveness is found, whereas such an extra effect could not be demonstrated for social skills programs.

The question remains, why extra effects of perceived quality of strategic aligning on effectiveness were stronger for the financial/commercial sector than for the industry, because little differences in actual strategic aligning activities were found between these two sectors. It also is not clear why extra effects were found for automation programs but not for social skills programs. These latter programs faced a more thorough and structured aligning procedure than the automation programs did, and a significant coherence was found between the perceived quality of strategic aligning and the several dimensions of the aligning procedure, which indicates that the better the

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aligning procedure was performed, the better the perceived quality of HRD aligning. Possible explanations could not be found in differences in strategic aligning, because no significant differences were found for economic sector and type of HRD programs or even for combinations of both. The perceived strategic aligning for social skills programs in industry companies does not significantly differ from the perceived strategic aligning for automation programs in financial/commercial services.

Because no significant association was found between the perceived HRD effectiveness and the several dimensions of actual strategic aligning activities, further research on this topic is needed. As mentioned in the outset of this paper, strategic aligning refers to the interrelationship between HRD representatives and relevant company officials at the various levels of the organization, the so-called stakeholders. Perceived HRD effectiveness will depend on the position of relevant stakeholders in the company and the kind of effects they expect from the performed HRD programs (Wognum, 1994). HRD participants for instance see other effects as important than company managers or HRD company representatives. In other words, the perceived HRD effectiveness could be different for the various stakeholder groups. The degree to which this will be the case probably depends on the process of strategic HRD aligning.

In this paper only the results of one respondent group, namely the participants of the selected HRD programs, were are reported. In further research these results have to be completed with and compared to the results of the other three respondent groups, the HRD company representatives and the supervising managers and subordinates (if present) of the HRD participants. This activity will be done to gain more insight in the effects of strategic HRD aligning on HRD effectiveness.

References

Banathy, B.H. (1991). *Systems Design of Education. A Journey to Create the Future.* Englewood Cliffs: Educational Technology Publications.

Bergenhenegouwen, G.J., E.A.M. Mooijman & H.H. Tillema (1992). *Strategisch Opleiden in Organisaties. [Strategic HRD in Organizations.]* Deventer: Kluwer Bedrijfswetenschappen.

Goldstein, H. (1995). *Multilevel statistical models.* London: Edward Arnold.

Rummler, G.A. & Brache, A.P. (1995). *Improving performance: how to manage the white space on the organization chart.* San Francisco: Jossey-Bass.

Swanson, R.A. (1994). *Analysis for improving performance. Tools for diagnosing organizations & documenting workplace expertise.* San Francisco: Berett-Koehler.

Torraco, R. (1995). HRD Alignment: A systemic assessment of HRD in organizations. Holton III, E.F. (Ed.) *AHRD, Conference Proceedings*, St. Louis: AHRD 12-1

Wognum, A.A.M. (1994). Assessing HRD effectiveness from a strategic point of view. *Tijdschrift voor Onderwijswetenschappen*, 24(2/3), 77-89.

Wognum, A.A.M. (1995). HRD Policy Making in Companies: An interpretation of the differences. Holton III, E.F. (Ed.) *AHRD, Conference Proceedings*, St. Louis: AHRD, 12-2.

Wognum, A.A.M. & M. Mulder (1997) *Strategisch Opleiden.*[Strategic HRD]. Tijdschrift voor Hoger Onderwijs [Journal for Higher Education] 15(3), 265-281).

Intrapreneurial Programs and Their Impact on Sales, Profit, and Return to Investors

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Intrapreneurship is becoming more evident in major corporations both nationally and internationally. The global impact of this concept could dramatically effect organizational profits and products. In this study Fortune 500 organizations were surveyed to determine the extent to which this emerging concept was incorporated into their own organizations and to what extent it had impacted the variables of sales, profit, and return to investors.

To date, research in the field of *intra*preneurship has been limited. The majority of prior research has focused on the appropriate utilization of rewards (Sathe, 1985; Souder, 1981; Kanter, 1983), management support (Souder, 1981; Macmillan, 1986), resource availability (Souder, 1981; Kanter, 1983), organizational structure (Souder, 1981; Sathe, 1985; Burgelman, 1984), and risk taking (Macmillan, 1986; Sathe, 1985; Burgelman, 1984; Kanter, 1983). Chisoholm (1987), Balkin and Logan (1988), and Brazeal and Weaver (1990) included descriptive and statistical studies in varying settings for the purpose of adding applied knowledge to the field of study as related to personal intrapreneurial characteristics. By incorporating the basis of prior descriptive research, it appears that the relationship of intrapreneurial programs to the corporate environment as well as its impact on corporate performance is an area for more specific investigation.

An examination of intrapreneurial variables indicates that research has tended to cluster into the specific areas of descriptive research, modeling, and empirical research dealing primarily with focused firm characteristics as they related to certain companies. To date, this empirical research has been limited and included primarily that of Knight (1985), Kuratko and Montagno (1989); and Kuratko, Montagno and Hornsby, (1990). Those interested in the field have proposed credible reasons for the use and advocacy of the intrapreneur. Dynamic changes in the corporate environment often contribute to the overall determination of additional considerations. This is especially evident given development and management of future innovations (Ellis, 1985). Yet, as research and development dollars have been viewed as more productive, the changing corporate environment requires a greater innovation base in order to remain competitive.

Problem Statement and Theoretical Framework

Quantitative research in the field of intrapreneurship has been somewhat limited (Miller, 1983). Given the dynamic conditions of both the corporate environment and the United States economy, the contributions provided by the intrapreneur are especially relevant (Backman, 1983). Employee contributions have become increasingly important in the overall organization, especially when considering the need to improve efficiency, effectiveness and various financial indicators. With the ever-changing workplace, those contributions may take many forms (Baumol, 1968; Cooper, 1985; Jones and Butler, 1992; Gupta, 1995). The concept of intrapreneurship is a technique that can be utilized in an attempt to incorporate employee contributions that may potentially lead to financial gain, while simultaneously positively effecting motivation, morale, and reward systems (Cole, 1959; Collins, 1981; Howell and Higgins, 1990; Knight, 1985; Kintzer, 1996). Thus, the purpose of this study was to investigate whether significant differences in performance existed when corporations report the presence of intrapreneurial programs within the existing organizational structure based on established financial indicators.

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This study investigated the corporate performance of Fortune 500 companies within ten (10) manufacturing industries in the United States by analyzing the impact of product and/or process development and/or improvement programs (otherwise termed intrapreneurial programs) on overall corporate performance. The investigation focused on corporate intrapreneurial programs in Fortune 500 firms and utilized a self-reporting questionnaire technique in order to determine the presence of such programs within the organization. Prior to distribution of the final research questionnaire a successful panel of experts and pilot study was selected and subsequently conducted. Further analysis was performed to determine the significant impact on company performance as related to sales, profit, and return to investors.

Research Hypotheses

The investigation of this research focused on ten (10) separate industries contained within the Manufacturing Division of the Standard Industrial Classification Manual (1987,1992). The focus of this investigation was formalized in the following research hypotheses and subsidiary questions.

H_{01}: When intrapreneurial programs are incorporated into the organization, responses and financial data will provide for the basis of comparison to conclude organizational performance, as measured by total sales, is not significantly impacted.

H_{02}: When intrapreneurial programs are incorporated into the organization, responses and financial data will provide for the basis of comparison to conclude that organizational performance, as measured by profit, is not significantly impacted.

H_{03}: When intrapreneurial programs are incorporated into the organization, responses and financial data will provide for the basis of comparisons to conclude that organizational performance, as measured by total return to investors, is not significantly impacted.

Subsidiary Question #1: Will the organization's perception of success of the intrapreneurial program be correlated to the length of time it has been present within the organization?

Subsidiary Question #2: Will the organization's perception of intrapreneurial program success be correlated to company size?

Subsidiary Question #3: Will the company's perception of intrapreneurial program success be correlated to functional area of product/idea development/improvement within the organizational structure?

Subsidiary Question #4: Will the organization's perception of intrapreneurial program success be correlated to the industry classification?

Methodology

Research Design

This survey research included testing hypotheses. The sampling method included a randomized design which incorporated a stratified sampling technique. In order to test the stated hypotheses, industry selection was incorporated. The selection was based upon prior literature which indicated that certain industries utilized intrapreneurial-type programs. Upon completion of the initial industry determination, random selection of companies from within the Fortune 500 was possible.

The research analysis included descriptive techniques (mean and frequency) and a correlational technique. The t-test, correlational, and descriptive techniques were utilized in combination to determine significant differences among companies with regard to relevant financial data.

Potential independent variables relevant to this study included: 1) the presence of intrapreneurial programs within a given organization, 2) perceptions of success with regard to organizational structure, 3) primary functional areas of intrapreneurship, and 4) number category of product and/or process development/improvement. The dependent or criterion variable in this research was the impact of the independent variable (presence of an intrapreneurial program) on overall organizational performance. Thus, the overall performance was measured according to impact on total sales, profit, and return to investors. Since the financial indicators were measured in different terms (return to investors as a percentage; and total sales, and profit as an aggregate dollar value), the independent variable was compared to each financial indicator separately.

Sample

This investigation randomly selected manufacturing firms from the population of Fortune 500 organizations. This focus on the Manufacturing Division of the Standard Industrial Classification was based on a review of the literature which indicated that a preponderance of intrapreneurial programs existed in large manufacturing firms as compared to other classification divisions. Approximately twenty-two (22) two-digit codes exist within the Standard Industrial Classification which represent the major groups within the Standard Industrial Classification Manual (1972, 1987 Editions).

Within each industry, 20-22 firms were randomly selected in order to provide for statistical and descriptive analysis. A composite listing of the names and addresses of the potential respondents (chief executive officers) was compiled through the use of the Compact Disclosure Database and cross-referenced with the 1993 Fortune 500 listing to ensure an accurate population. To allow for tracking procedures of the survey responses, a master list was developed. Five-hundred (500) firms comprised the total population for the research with 217 companies selected for sampling purposes. Procedures consistent with those utilized in the initial distribution were utilized in the follow-up mailing process with one hundred (100) questionnaires (46.1%) being returned.

As shown in Table I, the Fortune 500 companies selected for this research represented a cross-section of various manufacturing industries and were selected according to the Standard Industrial Classification.

Table I
Master List Coding for Industry By SIC Code: (Pilot Study and Research Distribution)

Code Number	Industry	Code Number	Industry
1	Food and Kindred Products	6	Industrial & Farm Equipment
2	Chemicals	7	Transportation Equipment
3	Computer & Office Equipment	8	Petroleum Refining
4	Electronics & Electrical Equipment	9	Publishing & Printing
5	Forest & Paper Products	10	Scientific, Photographic & Control Equipment

Data Analysis Procedures

Each questionnaire was identified with a packet number and industry number for follow-up purposes only. Database fields were designed to compute the percentage and/or frequency scores from raw scores and were statistically analyzed using the Statistical Analysis System. Questions within the research questionnaire were analyzed using descriptive, inferential and correlational techniques. In order to test each hypothesis, t-tests were conducted to investigate significant differences between each financial indicator and the specified independent variable. The correlational technique allowed for the development of a matrix for specific factors (within an organization) that were previously identified as the most important in the development of an intrapreneurial program. In order to accomplish this objective, respondents were requested to rank order the listing of items provided. Frequency and mean distributions were utilized to address the subsidiary questions proposed in this research.

Results and Conclusions

Research Analysis

The research sample (217 participants) were sent a survey instrument (as shown in Table II). One hundred participants (46.1%) responded. T-tests, mean and frequency distributions, and a correlational technique were incorporated for analysis.

Table II

Research Survey

Organizational Intrapreneurship Program
Research Survey

Q#:_____

Ind#: _____

Intrapreneurial Programs

Directions: Please circle the appropriate response to the following questions as they refer to product and/or process development and improvement within your organization. If you respond positively to either question #1 or #2, please also indicate the length of time such a program has existed within your organization.

1.	Does an informal intrapreneurial program exist within your organization?	Yes	No	N/A		Less than 3 years	3-5 years	6-10 years	More than 10 years
2.	Does a formal intrapreneurial program exist within your organization?	Yes	No	N/A		Less than 3 years	3-5 years	6-10 years	More than 10 years
3.	Does your organization have formal policies that foster intrapreneurship?	Yes	No	N/A					
4.	Does your organization have formal procedures that foster intrapreneurship?	Yes	No	N/A					

5. What is the informal intrapreneurship program within your organization called? ____________________

6. What is the formal intrapreneurship program within your organization called? ____________________

7. In which functional area of your organization do the majority of intrapreneurial product/process development ideas originate? *Please choose only one response.*

__ Engineering
__ Finance/Accounting
__ Marketing
__ Materials Management
__ Personnel
__ Production
__ Public Relations
__ Quality Control
__ Research & Development
__ Other:
(Specify) __________

8. Please rank order the following factors, providing a priority to their importance, with regard to product and/or process development (intrapreneurial) programs within your organization. (1=highest priority; 8=lowest priority)

RANK	FACTOR	RANK	FACTOR
___	Technology Considerations	___	Financial Analysis
___	Patent Potential	___	Product Design
___	Personnel	___	Resource Availability
___	Development Costs	___	Competitive Market Analysis

9. Please indicate (circle) the degree to which your organizational intrapreneurial program has impacted each of the following factors and whether the program positively or negatively impacted your organization:

a. TOTAL SALES	No Impact	Slight Impact	Moderate Impact	Significant Impact		Positive	Negative
b. PROFIT	No Impact	Slight Impact	Moderate Impact	Significant Impact		Positive	Negative
c. TOTAL RETURN TO INVESTORS	No Impact	Slight Impact	Moderate Impact	Significant Impact		Positive	Negative

Organizational Structure

10. Within the last 2 years, approximately how many products and/or product improvements developed through the intrapreneurial program have led to:

a. development of a prototype?	0	1-5	6-10	11-20	21-30	31-40	More than 40
b. test market stage?	0	1-5	6-10	11-20	21-30	31-40	More than 40
c. commercialization of the product?	0	1-5	6-10	11-20	21-30	31-40	More than 40
d. contributions to overall corporate sales?	0	1-5	6-10	11-20	21-30	31-40	More than 40

11. Within the 3 years prior to the intrapreneurial program, approximately how many products and/or product improvements led to:

a. development of a prototype?	0	1-5	6-10	11-20	21-30	31-40	More than 40
b. test market stage?	0	1-5	6-10	11-20	21-30	31-40	More than 40
c. commercialization of the product?	0	1-5	6-10	11-20	21-30	31-40	More than 40
d. contributions to overall corporate sales?	0	1-5	6-10	11-20	21-30	31-40	More than 40

The following statements (12-17) relate to the intrapreneurial program (formal or informal) that exists within your organization. Please indicate (circle) the degree to which you agree/disagree with each statement.

12.	The corporate philosophy is one in which innovation is emphasized.	Strongly Agree	Somewhat Agree	Agree	No Opinion	Disagree	Somewhat Disagree	Strongly Disagree	Not Applicable
13.	Goals are in place to encourage intrapreneurship.	Strongly Agree	Somewhat Agree	Agree	No Opinion	Disagree	Somewhat Disagree	Strongly Disagree	Not Applicable
14.	The organization's intrapreneurial program has procedures for obtaining funding for project development.	Strongly Agree	Somewhat Agree	Agree	No Opinion	Disagree	Somewhat Disagree	Strongly Disagree	Not Applicable
15.	Corporate incentives have been established to encourage participation in the intrapreneurial program.	Strongly Agree	Somewhat Agree	Agree	No Opinion	Disagree	Somewhat Disagree	Strongly Disagree	Not Applicable
16.	The organization has specific criteria for the development of intrapreneurial ideas.	Strongly Agree	Somewhat Agree	Agree	No Opinion	Disagree	Somewhat Disagree	Strongly Disagree	Not Applicable
17.	The intrapreneurial program is available to employees throughout the organization.	Strongly Agree	Somewhat Agree	Agree	No Opinion	Disagree	Somewhat Disagree	Strongly Disagree	Not Applicable

18. Please indicate (circle) the approximate number of organizational employees for each of the following categories:

domestically only	Less than 2,500	2,500 - 5,000	5,001 - 10,000	10,001 - 25,000	Greater than 25,000
domestically and internationally	Less than 2,500	2,500 - 5,000	5,001 - 10,000	10,001 - 25,000	Greater than 25,000

Policies and Procedures

19. Which policies within your organization, if any, relate to the concept of intrapreneurship?

20. Which procedures within your organization, if any, relate to the concept of intrapreneurship?

[If such policies and procedures exist, we would appreciate your assistance in obtaining a copy, provided such a request is consistent with company policy.]

NOTE: Please attach separate any comments you may wish to include.

Thank You For Your Assistance!!!!

BEST COPY AVAILABLE

Each questionnaire was coded as to industry and sequential packet number to allow for follow-up. With regard to respondents, 75% (75) of the respondents returned the questionnaire on the initial mailing and the remaining 25% (25) on the follow-up.

General trends from the questionnaire categories indicated a 'moderate to significant impact" on the specified financial indicators under investigation. The number of developments increased over the 3-year time period prior to program implementation. With regard to organizational policies and procedures, respondents indicated a variety of agreement to various statements provided. Results of the investigation are included as Table III.

Table III

Comparison of Program Type vs. No Intrapreneurial Program for Sales, Profit, and Return to Investors

Dependent Variable	Program Existence	Mean	T	P-Value
PROGRAM TYPE: INFORMAL PROGRAM				
Sales	Intrapreneurial Program Exists	6910.58	-1.15	0.2540
	No Program	12567.78		
Profit	Intrapreneurial Program Exists	133.33	-1.83	0.0733
	No Program	571.24		
RTI	Intrapreneurial Program Exists	20.38	1.06	0.2909
	No Program	13.48		
PROGRAM TYPE: FORMAL PROGRAM				
Sales	Intrapreneurial program Exists	8136.65	-0.18	0.8570
	No Program	8790.36		
Profit	Intrapreneurial Program Exists	238.67	-0.40	0.6866
	No Program	310.91		
RTI	Intrapreneurial Program Exists	17.39	-0.18	0.8515
	No Program	18.63		
PROGRAM TYPE: ENTIRE PROGRAM (both Formal and Informal Programs)				
Sales	Intrapreneurial program Exists	8305.37	-0.92	0.3627
	No Program	13871.86		
Profit	Intrapreneurial Program Exists	198.60	-1.30	0.2004
	No Program	527.90		
RTI	Intrapreneurial Program Exists	18.04	0.12	0.9000

α=.05

Sales-The test for overall effect of informal intrapreneurial programs resulted in a t-value of -1.15 and a p-value of 0.2540. Similarly, the t-values (-0.18) and (-0.92) for formal intrapreneurial program and aggregate programs (formal and informal) were not significant at the .05 level and the null hypothesis was not rejected.

Profit-At the .05 level of significance the effect of informal intrapreneurial programs resulted in a t-value of -1.83. As previously seen with "sales", this was not significant at the .05 level and the null hypothesis was not rejected. Analysis of both the formal (t-value=-0.40) and the aggregate programs (t-value=-1.30) yielded similar data.

Return to Investors-For overall effect of informal intrapreneurial programs the analysis resulted in a t-value of 1.06. This was not significant at the .05 level and thus, the null hypothesis was not rejected. Similarly, the t-values for formal intrapreneurial programs (-0.18) and aggregate programs (0.12) were not significant at the .05 level and the null hypothesis was not rejected. As shown in Table IV, respondents were also asked to rank order a specified group of factors which were previously identified as important in the product development process.

Table IV
Pearson Correlation Coefficient matrix Indicating Factor Rank Considerations

	Technology	Patent Potential	Person	Develop-ment Cost	Financial Analysis	Prod Design	Resource Available	Compet Mkt Anal
Technology		-0.07 (0.58, n=70)	-0.17 (0.16, n=66)	0.08 (0.52, n=66)	**-0.31 (0.01, n=70)**	-0.17 (0.17, n=67)	**-0.28 (0.02, n=68)**	-0.02 (0.84, n=70)
Patent Potential			0.004 (0.97, n=66)	-0.14 (0.26, n=66)	0.18 (0.13, n=70)	**-0.33 (0.006, n=69)**	--0.09 (0.48, n=69)	-0.07 (0.58, n=71)
Personnel				**0.50 (.001, n=66)**	-0.20 (0.10, n=66)	0.30 (0.81, n=66)	-0.09 (0.49, n=66)	0.02 (0.88, n=66)
Development Cost					0.19 (0.11, n=66)	0.03 (0.81, n=66)	-0.15 (0.22, n=66)	**-0.61 (0.0001, n=66)**
Financial Analysis						**-0.36 (.002, n=67)**	-0.23 (0.06, n=68)	0.03 (0.82, n=70)
Product Design							-0.11 (0.39, n=67)	-0.21 (0.09, n=68)
Resource Avail-ability								0.01 (0.09, n=68)
Compet Mkt Analysis								

Note: Significant correlations in bold.
α=.05

Significant among correlations were the relationships between financial analysis and technology (r=-0.31); resource availability and technology (r=-.28); patent potential and product design (r=-0.33); personnel considerations and development costs (r=.50); competitive market analysis and development costs (r=-0.61); and product design and financial analysis (r=-0.36). Correlations between other variables proved inconclusive.

Summary

In summary, the research investigated whether incorporation of intrapreneurial programs into the organizational structure would provide an impact on organizational performance, as measured by total sales, profit, and return to investors. None of the hypotheses were rejected in this study. With regard to subsidiary question #1 which stated, "Will the organization's perception of success of the intrapreneurial program be correlated to the length of time it has been present within the organization?" Results indicated that for *product development/improvement in informal programs*, 55.56% of those responding indicated prototype development with programs that had been in existence for more than 10 years. The majority of respondents also indicated that informal programs had been in existence for more than ten (10) years for the number of products at the test market stage, commercialization of products, and contribution to overall corporate sales (60.00% for test market stage; 59.18% for commercialization of products, and 58.33% for corporate sales).

With regard to the existence of formal intrapreneurial programs, a cross tabulation of the variables indicated that programs which had been in existence for 3-5 years provided the largest number of successes in all categories (prototype, test market stage, commercialization of product, and contribution to corporate sales).

Subsidiary question #2 addressed whether the organization's perception of intrapreneurial program success was correlated to company size. Analysis of the data indicated that a majority of prototype success occurred within the category of 10,000-25,000 employees with 41.25%. The test market stage was also most successful in the category of 10,000-25,000 employees with 21.45%. Commercialization and contribution to corporate sales were most successful in the category of "Greater than 25,000 employees" with 29.37%.

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Subsidiary question #3 investigated whether the company's perception of intrapreneurial program success was correlated to functional area of product/idea development/improvement (within the organizational structure). Respondents were asked to indicate which functional area provided the majority of product development/improvement for their organization. Respondents clearly indicated the most predominant area for such efforts to be the functional area of research and development with 44.26% responding. This category was followed by engineering with 32.79%. Frequency table analysis indicated that programs having "1-5" and "11-20" prototypes within the last two years, were most prominent in the engineering and research and development functional areas. Research and development was dominant for the category of "More than 40" developments.

At the test market stage level, the research and development functional area was dominant with 1-5 product developments with 18.08% and was closely followed by engineering with 16.39%. Data indicated that the *number of commercialized products* and *contribution to overall corporate sales within the last two years* was dominant in the engineering area with 20.00% and 18.75%, respectively and research and development with 16.92% and 15.63%, respectively.

Finally, the last subsidiary question investigated whether the organization's perception of intrapreneurial program success was correlated to the industry classification with results indicating that the computer, electronics, and scientific equipment categories were dominant for prototype development and test market stage (as shown in Table V).

Table V
Ranking Means for Development Factors

Variable	Mean	N	Order
Technology	2.78	70	1
Patent Potential	6.22	72	7
Personnel	6.33	66	8
Development Costs	4.65	66	6
Financial Analysis	4.02	70	4
Product Design	3.59	69	2*
Resource Availability	4.24	69	5
Compet Mkt Analysis	3.59	71	3*

*indicates tie

Commercialization of a product and *contribution to corporate sales* were most often indicated in the electronics industry and was followed by the computer industry. Ranking means for development factors further indicated that technology, product design, and competitive market analysis were most important (mean ranking order 1, 2, 3). Conversely, development costs, patent potential, and personnel factors were of lowest priority (with a mean ranking of 6, 7, 8, respectively). Respondents were asked to subjectively indicate the degree to which the intrapreneurial program within their organization had impacted each of the financial factors and whether that impact was positive or negative. Analysis by frequency distribution showed that (with regard to sales) 32.8% of the respondents indicated "moderate impact" and 35.8% indicated significant impact. Similarly, (with regard to profit) 37.3% indicated "moderate impact" while 26.9% indicated 'significant impact". Results for return to investors were parallel with 43.3% indicating "moderate impact' and 32.8% indicating "significant impact". All respondents indicated impact as being positive. Finally, with regard to industry classification and program success, the electronics and computer industries were most dominant.

Contribution to Knowledge in HRD

The topic of intrapreneurship has wide reaching impact to organizations representing various divisions. Because the concept of intrapreneurship is new to most organizational climates, the development and follow-up of this research is paramount. The identification of 1) intrapreneurial programs, 2) organizational structure, and 3) policies and procedures provide a point from which the impact on financial indicators may be closely aligned with the future need to create efficiencies within the organization.

By investigating the impact of intrapreneurial programs on the financial aspects of the organization, researchers and managers alike will have an improved understanding of the effect of these programs on the entire organization. As these programs continue to become more and more evident in varying organizational structures, future research will provide an objective basis for determining the extent to which such programs are feasible and have the potential to be incorporated into the organizational structure.

The financial measures of this study, provide not only a basis for measuring the impact on profit, sales, and return to investors, but also impacts heavily the need for human resource development for policies, appropriate training opportunities, manpower management, and benefit/incentive programs.

References

Backman, J. (1983). Entrepreneurship and the Outlook for America (pp. 8, 243). New York: The Free Press.

Balkin, D. B. & Logan, J. W. (1988). Reward policies that support entrepreneurship. Compensation and Benefit Review, 20, 18-25.

Baumol, W. J. (1968). Entrepreneurship in economic theory. American Economic Review, 58, 64-65.

Brazeal, D. W. & Weaver, K. M. (1990). Differential motivating factors and traditional managers?: A look at the influence of reward systems and structures on performance among intrapreneurial and traditional managers. Journal of Creative Behavior, Fourth Quarter, 24, 4, 263-275.

Burgelman, R. (1984). Designs for corporate entrepreneurship. California Management Review, 26, 21-42.

Chisoholm, T. A. (1987). Intrapreneurship and bureaucracy. SAM Advanced Management Journal , 52, 36-40.

Cole, A.H. (1959). Business Enterprise in It's Social Setting (pp. 124, 128). Cambridge: Harvard University Press.

Collins, S. (1981). Incentive programs: Pros and cons. Personnel Journal, 60, 571-575.

Cooper, A. C. (1985). The role of incubator organizations in the founding of growth-oriented firms. Journal of Business Venturing, 1, 75-86.

Ellis, J. (1985). Starting a small business inside a big one. Money, 85-90.

Gupta, U. (1995). Intrapreneurs from the inside out. Information Week, 12-14.

Howell, J. M. & Higgins, C.A. (1990). Champions of technological innovation. Administrative Science Quarterly, 35, 2, 317- 341.

Jones, G. R. & Butler, J. E. (1992). Managing: Internal corporate entrepreneurship: An agency theory perspective. Journal of Management, 18, 4, 733-749.

Kanter, R. M. (1983). The change masters. Management Review, 72, 18-23.

Kintzer, F.C. (1996). Entrepreneurship in higher education: A critical balance. ED 401960, 17.

Knight, R. M. (1985). Corporate innovation and entrepreneurship in Canada. Business Horizons, 83, 85.

Kuratko, D. & Montagno, R. (1989). The intrapreneurial spirit. Training and Development Journal, V43, 10, 83-87.

Kuratko, D., Montagno, R. & Hornsby, J. (1990). Developing an intrapreneurial assessment instrument for an effective corporate entrepreneurial environment. Strategic Management Journal, V11, NnSP, 49-58.

Macmillan, I.C. (1986). Corporate venturing: Alternatives, obstacles encountered, and experience effects. Journal of Business Venturing, 1, 177-191.

Miller, D. (1983). Entrepreneurial success correlates in three types of firms. Management Science, 29, 770, 776.

Sathe, V. (1985). Managing an entrepreneurial dilemma: Nurturing entrepreneurship and control in large corporations. Babson College Entrepreneurship Research Conference, Center for Entrepreneurial Studies, 636-657.

Souder, W. (1981). Encouraging entrepreneurship in large corporations. Research Management, 24, 18-22.

Standard Industrial Classification Manual (1987, 1992). Superintendent of Documents, U.S. Government Printing Office, Washington, D.C.

The Influence of Curiosity on Various Dimensions of Workplace Job Performance

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Scant information exists about the possible roles of curiosity in informal workplace learning and job performance. In this research, 233 subjects took a a battery of tests: four measuring curiosity, one assessing socialization-related learning (a kind of informal learning), and one determining job performance. Curiosity was found to influence both socialization-related learning and job performance, indicating the desire for information does play a meaning role in workplace learning. Implications for adult learning and organizational socialization theory and practice were discussed.

In important learning environments like the workplace, continuous learning and thus curiosity assists people in making sense and use of increasing amounts of new, novel, and discrepant information. Indeed, Kozlowski (1995) claimed that from the moment one prepares to apply for a job, through learning the complex requisite technical and interpersonal skills of their position, to surmounting the daily challenges of an ever-changing work environment, the individual needs to be always ready to learn and learn more.

Ostroff and Kozlowski (1992), for instance, informed us that during the socialization process (the process of formally and informally communicating and transmitting an organization's technical job knowledge, culture, norms, and procedures), employees focus on acquiring new information to learn the technical and interpersonal skills necessary to properly perform in their new positions. The information needed to develop these technical skills comes from such diverse sources as official organizational literature, observation, and experimenting with new behaviors. Interpersonal skill information, alternatively, is derived mostly from mentors, supervisors, and coworkers. Therefore, new employees must be actively involved in gathering applicable information to learn the nuances of their position. By mastering these important job skills, the employee will be much more assured of higher levels of job performance and the organization will benefit.

McCloy, Campbell, and Cudek (1994) defined performance as "behaviors or actions that are relevant to the goals of the organization in question....[and it] is multidimensional" (p. 493). Motowidlo and Van Scotter (1994) identified two conceptually satisfying dimensions of job performance, i.e., task performance and contextual performance.

Curiosity, or the desire to gain information and knowledge (Berlyne, 1960), has been consistently extolled in the business literature as something worthy of encouragement in the workplace. Tjosvold and Field (1982) noted that managers could affectthe outcome of decision-making by structuring the manner in which group members were allowed to reach decisions. Groups instructed to be in a controversy condition (versus a concurrence condition) searched for more information and explored a problem in greater depth (exhibiting more curiosity).

Purpose of the Study

Deming (cited in Senge, 1993, p. 6) declared that people's "curiosity to learn" is destroyed as they mature, especially in the workplace, with particularly detrimental effects on both their creativity and concomitant capacity to accommodate change. A more thorough understanding of curiosity's role in organizational learning (i.e., socialization-related learning) and job performance would assist the field of HRD in comprehending curiosity's vital function in fostering improved formal and informal organizational learning; enabling them to act accordingly to promote it. Such knowledge could assist practitioners as they facilitate employee workplace adaptation or

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socialization through training endeavors and employee development in general. Consequently, the purpose of this research was to empirically investigate the possible influences of adult curiosity and socialization-related learning on the two aforementioned dimensions of job performance, task and contextual.

Curiosity and Adult Learning

Reeve (1992) proposed an interesting model in which curiosity was the first step in the intrinsic motivation process. Reeves claimed that adults ultimately apply the practical skills developed through play activities in childhood to discovering how their environments can be changed.

Tough (1969) discovered "satisfaction of curiosity" was the second most commonly expressed reason for engaging in adult learning projects. Candy (1991) claimed that by emphasizing self-directed learning activities as a method of instruction "will arouse curiosity...and increase information-seeking activities" (p. 57). Therefore, the importance of curiosity in self-directed learning activities seems to be particularly important.

Giambra, Camp, and Grodsky (1992) reported interest in learning, i.e., information seeking as indicated by the curiosity for people or things, does not lessen as people age. In their study, they observed that older adults differed from younger adults with respect to the nature of the information they sought: Younger adults preferred to learn through direct interaction, while older adults preferred to learn through more passive means, such as reading.

Cavalieri (1996), in a qualitative research study of famous inventors, found that problem solving was curiosity driven. She noted that the Wright brothers, upon experiencing many failures in developing the airplane, were driven by curiosity to solve their engineering problems and to try and try again. She gave another example, Art Jones, who was apparently driven by curiosity only to build the best exercise equipment in the world (Nautilus).

Socialization-Related Learning

Much of the effort to elucidate the nature of the socialization process has concentrated on an employee's adoption of organizational values, goals, and attitudes (e.g., Schein, 1988). More recently, however, a much greater emphasis has been placed on viewing the process from a learning perspective (socialization-related learning). Ostroff and Kozlowski (1992) and others (e.g., Miller & Jablin, 1991) have claimed that organizational socialization should be viewed primarily as a process of formally and informally communicating and transmitting an organization's technical job knowledge, culture, norms, and procedures. Through mostly informal means, new employees need to be actively involved in gathering the appropriate information to learn their jobs. Therefore, the organizational socialization process is essentially an information-seeking process which relies heavily on new employees taking a proactive role in acquiring information to resolve uncertainties and to master the technical and interpersonal skill requirements of their positions.

To resolve the uncertainties about one's new job setting, its relevant features, and how to accomplish one's required tasks, one must learn through "trial and error, watching, asking, reading, and practice" (Wiswell, 1993, p. 1). This applies to new employees as well as seasoned workers since this socialization-related learning occurs each time a new employee enters an organization. It also applies when they switch to another department, are promoted, get a new coworker or boss, learn a new job task, or even when going back to school (Morton, 1993).

What possible role, then, does curiosity have in the socialization process? Berlyne (1960) posited that curiosity manifests itself in three epistemic (information- or knowledge-seeking) ways: observation, consultation, and thinking. Berlyne claimed that during the first of these, observation, individuals place themselves in situations that will foster learning. He cited examples ranging broadly from seeking gossip to the systematic observations and experiments of science. During consultation, individuals choose to obtain verbal and written information. Examples of this include asking questions of coworkers or supervisors, reading organizational literature, and writing letters. Finally, there is thinking. Berlyne considered epistemic thinking part of "productive" or "creative" thinking. Thinking in this sense refers to individuals gaining permanent possession of new knowledge. It differs significantly from "reproductive" thinking, where remembered material is called up to handle problematic situations.

New employees, then, more often in a necessarily high state of arousal, are motivated by feelings of uncertainty and employ many information sources and strategies to learn the interpersonal and technical requirements of their jobs. Among newcomers' socialization-related learning endeavors, Berlyne's (1960) collative variables (i.e., novelty, uncertainty, conflict, surprisingness, and complexity) would have particular relevance. Novel stimuli are more readily explored, the results of complex procedures are reflected upon, surprising information is remembered more clearly, and conflicting data are pondered. These activities all result in the assignment of meaning to present experiences, thereby assisting in the development of new cognitive maps (Miller & Jablin, 1991). All of these manifestations of epistemic curiosity and exploratory behavior are accompanied by observational, consultative, and thinking tactics which result in vital learning. Without this learning, newcomers are not likely to be socialized, turnover is more assured, and the organization will more probably suffer.

Curiosity and Job Performance

The notion that continuous learning, in general, is a necessary component of a workplace capable of adroitly handling change can scarcely be argued against. One facet of learning in an adult context could be an individual's degree of successful socialization-related learning, especially for newcomers (Ostroff& Kozlowski, 1992). Moreover, another manifestation of learning could be the performance of one's job, as it is unlikely one could perform their job for any period of time without the benefit of some prior and continuous learning (Miller & Jablin, 1991).

Motowidlo and Van Scotter (1994) described two dimensions of job performance. The first, task or technical job performance, is the behavior associated with maintaining and servicing an organization's technical core. It refers to the direct transformation of the raw goods of an organization into the goods and services that it produces. Examples of this would be teaching a college class, cashing one's paycheck at a bank, operating a printing press in a newspaper plant, or planting a tree. By contrast, the second dimension of job is contextual or interpersonal job performance. This is a function of one's interpersonal skill knowledge, i.e., it supports the broader social environment in which the technical core must function. Specifically, interpersonal job performance is most closely related to the helping and cooperative elements of desirable organizational behavior.

Method

Subjects. The cross-sectional sample consisted of 152 men and 81 women, 17 to 60 years old, from four companies in the service industry (N=233).

Instrumentation. Curiosity levels were determined by four well-studied, paper-and-pencil curiosity measures: The Melbourne Curiosity Inventory (MCI; Naylor, 1981), the State-Trait Personality Scale (STPI; Spielberger, Barker, Russell, De Crane, Westberry, Knight, & Marks, 1980), the Sensation Seeking Scale-Form V (SSS-V; Zuckerman, 1979), and the Novelty Experiencing Scale (NES; Pearson, 1970).

The MCI is a 40-item, self-report questionnaire measure of state and trait curiosity. The state curiosity scale asks respondents to designate how they feel at a particular moment, while the trait scale questions ask how they feel in general. The STPI is quite similar to the MCI in that it has both state and trait scales of curiosity (10 questions each), in addition to 10-item state and trait subscales of anger and anxiety (not examined in this research).

The Sensation Seeking Scale-Form V is a 40-item scale designed to measure sensation seeking. The test consists of four factor subscales: Disinhibition, Boredom Susceptibility, Thrill and Adventure Seeking, and Experience Seeking. Zuckerman, Ulrich, and McLauglin (1994) defined sensation seeking as "...the need for varied, novel, and complex sensations and experiences and the willingness to take physical and social risks for the sake of such experiences" (p. 563). The Disinhibition subscale represents the seeking of sensation stimuli through sexual activity, partying, and drinking. Boredom Susceptibility reflects a low tolerance for boredom and restlessness when there is a lack of varied stimulation in the environment. Thrill and Adventure

Seeking describes the desire to seek sensation stimuli through unusual or sometimes risky physical activities like mountain climbing. The fourth subscale, Experience Seeking, measures the seeking of unusual experiences and sensations and the unconventionalness of an individual's lifestyle.

The Novelty Experiencing Scale is an 80-item scale, consisting of four subscales measuring novelty experiencing or the motivation for new experiences. The tendency to seek novelty is broken down into four scales on the basis of the source of stimulation and the type of subjective experience. The source of stimulation can be internal or external to the individual, while the subjective quality of the experience is either cognitive or sensational. Pearson combined these classifications into a 2 x 2 model, yielding four forms of the tendency toward novelty experiencing: External Cognitive, Internal Cognitive, External Sensation, and Internal Sensation.

Socialization-related learning was determined by a modified version of the Workplace Adaptation Questionnaire (Morton, 1993). It is a self-reported, 22-item instrument, consisting of three subscales developed to measure employee socialization-related learning and one subscale that measures satisfaction with learning experiences. The four subscales are as follows: Job Knowledge, Acculturation to the Company, Establishing Relationships, and Satisfaction with Learning Experiences. Job knowledge refers to the extent respondents report mastering the tasks of their jobs. Acculturation to the company is a subscale that measures the extent to which employees learned the norms, values, and culture of their organizations. Establishing Relationships, the third subscale, assesses the employees' ability to identify coworkers who could provide useful information or who know their way around the organization. Lastly, the Satisfaction with Learning Experiences subscale evaluates employees' satisfaction with their learning experiences at the organization. For the purpose of this study, the Satisfaction with Learning subscale will not be examined.

Job performance and its two dimensions, Technical and Interpersonal (Motowidlo & Van Scotter, 1994), were assessed through a self-reported questionnaire measure developed for the purposes of this study. The 6-item instrument consists of three 2-item subscales; Overall Job Performance, Technical Job Performance, and Interpersonal Job Performance. Each of the six questions inquired about their current perceived level of job performance. The total instrument's reliability was .90.

Procedures. The tests were administered at the participants' places of work along with a demographic survey. The four companies, all operating in the suburbs of Washington, D.C., participated only on the condition of anonymity and were informed of the results. The purpose of the study was first explained to each subject, and the measures were then distributed, with an average administration time of 45 minutes per individual.

Data Analysis. All data analyses were performed with the EQS for Windows 5.4 routine.

Results

Table 1 shows the means, standard deviations, alphas, and number of items for each of the 12 curiosity subscales, the three socialization-related learning subscales, and the two job performance subscales.

Table 1. Descriptive Statistics for Instrument Subscales*

Subscale	M	SD	Alpha	# of Items
Job Knowledge	33.3	4.4	.96	8
Acculturation	19.0	3.5	.86	5
Establishing Relationships	21.2	3.0	.85	5
Melbourne State Curiosity58.5	11.5	.94	20	
Melbourne Trait Curiosity 60.8	10.0	.92	20	
State-Trait Personality-State	27.4	5.1	.79	10
State-Trait Personality-Trait	28.1	5.1	.80	10
External Sensation	11.9	4.8	.85	20
Internal Cognitive	13.3	5.4	.90	20
Internal Sensation	10.9	4.5	.83	20

External Cognitive	11.0	4.7	.83	20
Disinhibition	47.3	10.2	.67	10
Boredom Susceptibility	52.6	11.7	.60	10
Thrill and Adventure Seeking	43.6	11.8	.76	10
Experience Seeking	52.5	10.1	.48	10
Technical Job Performance	7.1	2.1	.71	2
Interpersonal Job Performance	7.8	1.7	.71	2

*Note. N=233

Three a priori determined (see Figures 1, 2, & 3) recursive path models suggesting the causal influence of curiosity on socialization-related learning and then job performance were tested. Standardized partial regression coefficients were calculated from a combination of the correlational matrix containing the three main study variables (curiosity, socialization-related learning, and job performance) and their standard deviations.

While each of the cognitive curiosity measures (MCI-state and trait, STPI-state and trait, and the NES's Internal and External Cognitive subscales) had somewhat moderate statistically significant relationships with both the learning and job performance variables in this study, the MCI subscales demonstrated the most robust relationships with the research variables and were used for subsequent calculations of standardized partial path coefficients (indeed each of the various curiosity subscales and the derived curiosity factor scores [not used in this study--see Reio, 1997] could have been meaningfully used as the first step in each of the 3 a priori determined path models). All of the following standardized partial path coefficients are significant at the $p < .001$ level.

In Figure 1, curiosity is represented as a single construct for the purpose of this simple theoretical model (MCI total score used), the standardized path coefficient for the path between curiosity and socialization-related learning (WAQ total score used) is .40, while the socialization-related learning to job performance (Total job performance score used) standardized path coefficient is .58. When interpreting this model, one would say that curiosity has an indirect influence on job performance, mediated through the socialization-related learning variable. Yet, the CFI (Comparative Fit Index) for this theoretical model was .89; thus, these data disconfirmed the model, suggesting the need for an additional path to more fully explain the hypothesized curiosity to job performance relationship.

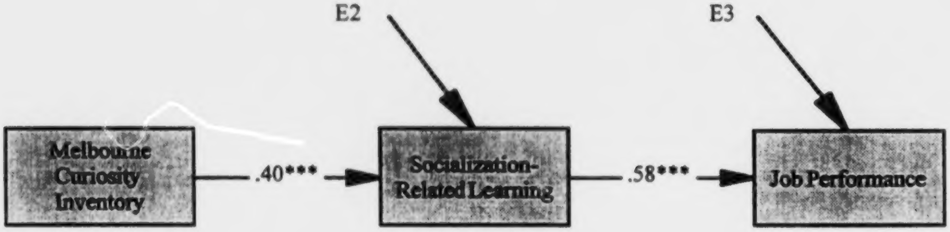

Figure 1. Curiosity to Job Performance Path Model

In Figure 2, there is an additional direct curiosity to job performance path. The standardized path coefficient for the new curiosity to job performance path is .23. The curiosity to socialization-related learning path is .40, and the socialization-related learning to job performance path's standardized path coefficient is .49. The multiple R of the direct curiosity path to job performance is .16, while the path mediated by socialization-related learning is .38.

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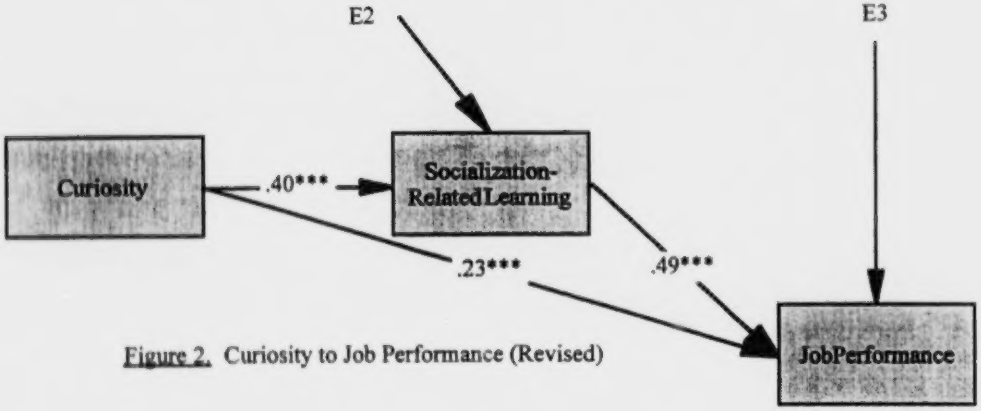
E2
E3
Curiosity
.40***
Socialization-Related Learning
.23***
.49***
JobPerformance

Figure 2. Curiosity to Job Performance (Revised)

Finally, Figure 3 is a path model where the dependent variable, job performance, is split into its two dimensions, i.e., Technical (task) and Interpersonal (contextual). The curiosity independent variable is, too, split into its state and trait components. With a CFI of .92, the data failed to disconfirm the model. There was no direct influence of state or trait curiosity on either of the job performance dimensions. Thus, the influence of state and trait curiosity on technical and interpersonal job performance was solely through the mediation of the socialization-related learning variable.

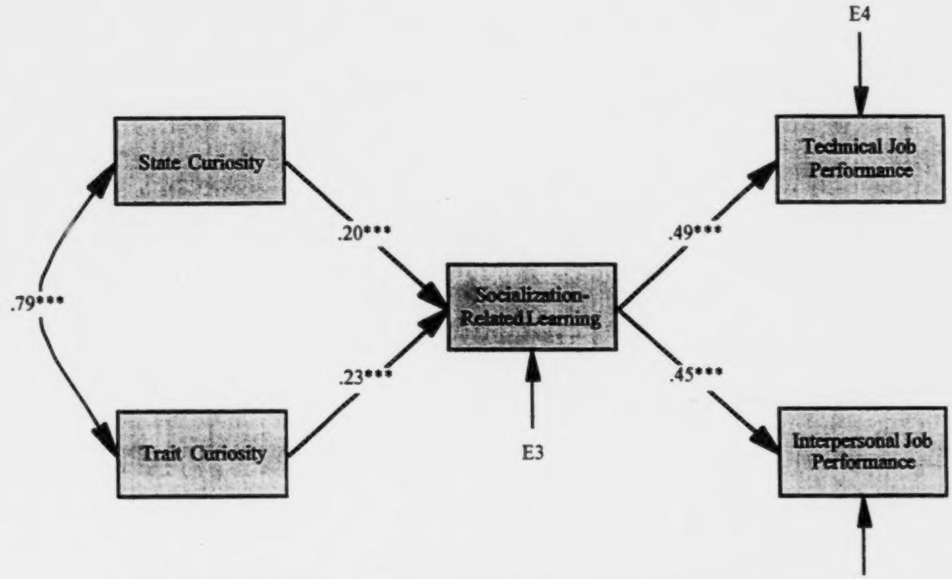
E4
State Curiosity
Technical Job Performance
.20***
.49***
.79***
Socialization-Related Learning
.23***
.45***
Trait Curiosity
E3
Interpersonal Job Performance
E5

Figure 3. Curiosity to the Dimensions of Job Performance Path Model

According to the theoretical models, therefore, adult curiosity has a direct influence on socialization-related learning, but a weak indirect, but statistically significant influence on both dimensions of job performance. Secondly, the socialization-related learning variable has quite a moderate influence on both of the job performance variables. The curiosity to learning relationship was expected due to support in the literature, as curiosity is a primary motivator and director of learning (e.g., Berlyne, 1960). Socialization-related learning, on the other hand, was expected to have an important influence on task mastery and thus technical job performance(e.g., Ostroff & Kozlowski, 1992).

The findings of this study provide empirical evidence that cognitive curiosity as measured by the MCI, STPI, or NES, seems to be a reflection, at least in part, of the importance of learning in the acquisition of job knowledge and the attainment of higher job performance, both technical and interpersonal.

Discussion and Implications of the Study

It seems clear that researchers acknowledge that curiosity plays some role in adult learning, yet little effort has been made to incorporate curiosity into existing adult learning theory. Knowles' (1990) Andragogical Model deserves special note. In his 1990 book, Knowles includes as his sixth assumption underlying the Andragogical Model, the notion that intrinsic and extrinsic motivators are important considerations for adult learning. He believed that internal motivators were the most potent.

Curiosity, too, is an internal learning motivator. Perhaps the importance and relevance of the Andragogical Model could be clarified by including curiosity in it. The empirical findings of this research suggest that curiosity plays a role in informal workplace learning, an important adult learning area. In addition, much prior research has determined that curiosity motivates and directs learning in general; it would seem appropriate to include curiosity in further discussions of adult learning in general, and the Andragogical Model in particular.

Further, the significant relationship between cognitive curiosity and socialization-related learning demonstrated in this research becomes even more meaningful when considering that service industry employees would generally be expected to possess lower curiosity levels (Naylor, 1981). Naylor claimed that Realistic, Enterprising, and Conventional work interests (according to Holland's (1973) six-fold RIASEC classification of occupational interests), such as those possessed by service industry employees in general, do not have a statistically significant relationship with curiosity.

Perhaps what is more engaging here is the idea that adult curiosity appears to be in part involved in informal workplace learning, like the socialization process, despite predictions otherwise (Naylor, 1981). Thus, curiosity and the information-seeking behaviors it elicits (e.g., question asking, thinking, and reflecting) seems to have a role in adult learning contexts, like the workplace, and not just in children's classroom situations.

These results also lend empirical support to current research (e.g., Miller & Jablin, 1991) that the socialization process may be meaningfully viewed as an information-seeking (which includes curiosity) or learning process. Employees may thus need some constant level of curiosity to proactively seek technical and interpersonal information from organizational literature, coworkers, and supervisors to adapt to an ever-changing work environment and ultimately to perform their job well.

In conclusion, the findings of this study provide empirical support for the notion that adult curiosity has a direct influence on the ever-important learning associated with the socialization process and an indirect influence on both dimensions of job performance. Curiosity should thus be an important consideration for adult educators, and HRD directors and practitioners alike. Stimulating curiosity in training endeavors may facilitate the necessary acquisition and application of learning by increasing learner arousal and promoting deeper exploration of workplace problems. Including curiosity, too, in adult learning theory building may be appropriate as it is an important component of adult learning.

HRD directors, whose primary responsibility is to manage organizational learning in order to improve employee productivity, can benefit from the knowledge that curiosity is important in workplace learning. By fostering a workplace environment where curiosity was positively acknowledged through evaluation, career development, and reward and compensation procedures, curiosity would be promoted, learning would be increased, and the organization would surely benefit.

References

Berlyne, D. E. (1960). Conflict, arousal and curiosity. New York: McGraw-Hill.

Candy, P. C. (1991). Self-direction for lifelong learning. San Francisco: Jossey-Bass.

Cavalieri, L. A. (1996). The processes of adult learning: Failure as feedback for motivation. In Proceedings of the 1st Triennial Eastern Adult, Continuing, and Distance Research Conference(in press). State College, PA: Penn State University Press.

Copeland, S., & Wiswell, A. K. (1994). New employee adaptation to the workplace: A learning perspective. In Proceedings of the National Conference of the Academy of Human Resource Development. (pp. 35-40). San Antonio, TX: ASTD Press.

Driscoll, M. P. (1994). Psychology of learning for instruction. Boston: Allyn and Bacon.

Giambra, L. M., Camp, C. J., & Grodsky, A. (1992). Curiosity and stimulation seeking across the adult life span: Cross-Sectional and 6-8-year longitudinal findings. Psychology and Aging, 7(1), 150-157.

Holland, J. L. (1973). Making vocational choices: A theory of careers Englewood Cliffs, NJ: Prentice-Hall.

Knowles, M. (1990). The adult learner: A neglected species (4th ed.). Houston, TX: Gulf Publishing.

Kozlowski, S. W. (1995). Organizational change, informal learning, and adaptation: Emerging trends in training and continuing education. The Journal of Continuing Higher Education, 2-11.

McCloy, R. A., Campbell, J. P., & Cudek, R. (1994). A confirmatory test of a model of performance determinants. Journal of Applied Psychology, 79(4), 493-504.

Miller, V. D., & Jablin, F. M. (1991). Information seeking during organizational entry: Influences, tactics, and a model of the process. Academy of Management Review, 16(1), 92-120.

Morton, S. (1993). Socialization-Related learning, job satisfaction, and commitment for new employees in a federal agency. Unpublished doctoral dissertation, Virginia Polytechnic Institute and State University.

Motowidlo, S. J., & Van Scotter, J. R. (1994). Evidence that task performance should be distinguished from contextual performance. Journal of Applied Psychology, 79(4), 475-480.

Naylor, F. D. (1981). A state-trait curiosity inventory. Australian Psychologist, 16, 172-183.

Ostroff, C., & Kozlowski, S. W. (1992). Organizational socialization as a learning process: The role of information acquisition. Personnel Psychology, 45, 849-874.

Reeve, J. (1992). Understanding motivation and emotion. Fort Worth: Harcourt Brace.

Reio, T. G., Jr. (1997). Effects of curiosity on socialization-related learning and job performance in adults. Unpublished doctoral dissertation, Virginia Polytechnic Institute and State University.

Schein, E. H. (1988, Fall). Organizational socialization and the profession of management. Sloan Management Review, 53-64 (reprint).

Senge, P. M. (1993). Transforming the practice of management. Human Resource Development Journal, 4(1), 5-32.

Tjosvold, D., & Field, R. H. G. (1982). Managerial decision making: The effects of structuring controversy and consensus. pp. 1-12. (ERIC Document Reproduction Service No. ED 227389).

Tough, A. (1969). Some major reasons for learning. Self-Concept in adult participation: Conference report and bibliography. (ERIC Document Reproduction Services No. ED 033252). pp. 19-38.

Voss, Hans-Georg, & Keller, H. (1983). Curiosity and exploration: Theories and results. New York: Academic Press.

Wiswell, A. K. (1993). Informal learning in the workplace: On-the-job-learning for human resource development. Unpublished manuscript, Virginia Polytechnic Institute and State University, Falls Church, VA.

Organizational Innovation and Human Resource Development—A Critique

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Organizational innovation is examined from the perspectives of HRD and management research. Critical science research is used to examine the underlying values and goals of the educator and manager with respect to innovation. Based on this critique, guidelines for future HRD research are proposed that capture more completely the value to organizational innovation offered by both education and management.

Innovation is widely recognized as an important factor in the development and success of all organizations. The importance of innovation for organizations and society as a whole is seldom disputed (Schumpeter, 1942). In recent years organizational scholars from psychology, sociology, economics, and other fields have produced over 3,000 publications (both empirical and nonempirical) on the diffusion of innovations alone (Rogers, 1983; Kuhn, 1993). Indeed, organizational growth and even survival are often tied directly to an organization's ability to adapt to a changing environment through innovation.

In spite of the importance attributed to organizational innovation, the research on this topic is fragmented and inconclusive. The terms innovation and creativity, even when specifically applied to organizations, often are used interchangeably, thus making comparative distinctions difficult (Van Gundy, 1987). Few models of innovation provide a systemic view of the subtle dynamics of innovation in organizations. Instead, past research studies seem to assume that organizations are either innovative or they are not (Aiken, Bacharach, & French, 1980; Dill & Friedman, 1979, Moch & Morse, 1977). Only recently has research underscored the subtle and serendipitous nature of innovation and the notion that it can occur in different organizational subsystems in different ways (Robinson & Stern, 1997; Human Relations, May 1997).

Continuous innovation is critical to sustaining organizational success in today's business environment. In addition, human capability is recognized as the ultimate source of innovation, and the development of human capability is the prime focus of HRD. Nonetheless, the realization of HRD's leadership potential in fostering organizational innovation requires the synthesis of new frameworks for the field. Despite the importance of innovation to the viability of organizations, no explicit role for HRD in organizational innovation has been advanced by the HRD field, nor has an implied role emerged from HRD's interest in human and organization development. Thus, there is a critical need for HRD to take a lead role in fostering innovation in organizations. This research will develop a framework for future research through which HRD can demonstrate its centrality to organizational innovation.

Methodology

An integrative review of management and HRD research was conducted following the methods specified by Jackson (1980) and Cooper (1982; 1989). Key factors related to organizational innovation from these literatures were examined. Managers and HRD professionals (educators) possess different values and goals with respect to organizational issues. Educators could be expected to emphasize the developmental aspects of work activities, while managers might be expected to place more value in the operational and entrepreneurial aspects of work activity.

This divergence among the values and goals of educators and managers was explored using a critical science approach. Critical social science increases the awareness of social actors of the contradictory conditions of action which are distorted or hidden by everyday

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understandings (Comstock, 1982). Using Comstock's critical science methodology, a dialectic tension (Carr & Kemmis, 1986; Fay, 1977) was created among the divergent and opposing ideas of managers and educators as the basis for elucidating the fundamental contradictions which are developing with respect to innovation in organizations. Contradictions are exposed between the current structures and conditions facing organizations seeking to innovate and the values and intentions of key stakeholders in the innovation process, including HRD and management. Comparison and critique of present conditions and understandings provide the basis for constructing models for future research (Weick, 1989; Whetten, 1989). Dubin's (1978) guidelines for systematic theory construction will be combined with the dialectic synthesis of critical science research (Comstock, 1982) to integrate new and existing concepts into a framework for HRD's role in organizational innovation.

Organizational Innovation

Since the 1950's, an increasing number of scholars have attempted to define the essence of creativity and innovation in both individual and organizational contexts (Isaksen, 1987). Amabile (1997) characterizes innovation as a type of entrepreneurial creativity. She defines innovation as the generation of useful ideas to establish a new business or new program to deliver products or services. According to Amabile, innovative ideas may have to do with (a) the products or services themselves, (b) identifying a market for the products or services, (c) ways to produce or deliver the products or services, and (d) ways to obtain resources to produce or deliver the products or services. As a point of departure for this paper, the term innovation refers to the generation of ideas for adaptation, change, and improvement that are critical for organizational success. Two aspects of innovation are emphasized: (a) innovation is examined as an organizational phenomenon, one that is closely associated with organizational adaptation, and, as some have argued, organizational survival, and (b) innovation is the generation of successful ideas—whether ideas address processes or outcomes, fundamentally new products/services or significant refinements of existing products/services. Innovation is not just an idea, but how well the idea is carried out in the context of the organization's mission. Innovation is a critical organization phenomenon—one on which organizations now rely more and more heavily for success.

Critique through Critical Science Research

The purpose of critical social science, an alternative to positivistic research, is "to increase the awareness of social actors of the contradictory conditions of action which are distorted or hidden by everyday understandings" (Comstock, 1982, p. 371). Critical social science is founded on the principle that we are all potentially active agents in the construction of our social world. We are all subjects, rather than the objects, of social and historical processes. The aim of critical social science is knowledge that leads to self-conscious action which liberates us from ideologically frozen conceptions of what currently exists and what is possible. Critical research is used in this study to elucidate the fundamental contradictions which are developing with respect to innovation in organizations.

Comstock's (1982) methodology for critical research used in this study involves the following seven phases:

- Identify social groups or movements whose interests are progressive.
- Develop an interpretive understanding of the intersubjective meanings, values, and motives held by all groups in the setting.
- Study the historical developments of the social conditions and the current social structures that constrain actions and shape understandings.
- Construct models of the relations between social conditions, intersubjective interpretations of those conditions, and participants'actions.
- Elucidate the fundamental contradictions which are developing as a result of actions based on ideologically frozen understandings.

- Participate in a program of education with the subjects that gives them new ways of seeing their situation.
- Participate in a theoretically grounded program of action which will change social conditions and will also engender new, less alienated, understandings and needs.

In the next section, these seven phases of critical science research will be applied to the study of innovation to clarify the different perspectives taken in HRD and management research to the study of organizational innovation. Through critical science research, misunderstandings based in the different values and ideology of the HRD and management disciplines emerge and can then by addressed through education and social change, the final phase of critical research. The conclusion of this paper expresses the need for education and change with respect to HRD and management research on innovation as a set of research guidelines for HRD scholars interested in organizational innovation.

Phase 1: Identify Social Groups. Critical research, as a vehicle for education and social change, must begin with the involvement of groups who are not only able but also willing to put the research findings into practice. Given the potentially central role of HRD to facilitate organizational innovation and the importance of innovation to the long-term organizational viability, educators and managers were identified as key groups with progressive interests in innovation.

Phase 2: Express Meanings and Values. Core values will be expressed from the perspectives of the manager and educator.

Manager Values. The following core values are derived from the foregoing literature on business entrepreneurship and innovation.

- The primary purpose of a business is to meet customer needs. As Drucker (1973) suscinctly states, "There is only one valid definition of business purpose: to create a customer" (p. 61).
- Sustained ability to meet customer needs requires organizational growth. Across all business activities, revenues must ultimately exceed costs (the requirement for positive cash flow).
- A variety of resources are needed to create value for customers such that they are willing to make purchases. Of these resources (i.e., human resources, plant, facilities and equipment, operating and investment capital), human resources have the greatest value to the organization. Human resources alone determine the ways in which all other resources are used.

Educator Values. The following are some central values of educators and HRD professionals.

- The development of human capability for a variety of work and life skills is an inherently beneficial endeavor.
- Education is a learner-centered experience wherein the responsibility and opportunity for application and integration of education with any of life's experiences, including work, resides in the learner.
- Workplace learning and the development of one's knowledge, skills and attitudes leads to enhanced job performance.
- Organization development, as defined by leading OD scholars, is an inherently beneficial endeavor.

Phase 3: Identify Social Developments and Conditions. Social developments and conditions will be discussed from a business perspective and an HRD perspective. The conditions from a management perspective follow.

- The goals of meeting customer needs and creating owner/shareholder wealth are the dominant priorities of most businesses. While important to many organizations, human resource development is rarely the primary governing objective of business organizations. A business must concurrently serve the needs of several. A business addresses the multiple, and sometimes, conflicting needs of their constituencies, including customers, employees, owners, community, and society, by establishing priorities. These priorities are manifested most directly by an organization's actions. Meeting the needs of customers and owners dominate the governing objectives of most business. Measures of business success are expressed in terms of financial and market performance (e.g., stock value, market share, return on equity). Only recently have measures been introduced, such as the Baldridge Award, that includes criteria on the development of human resources. Advancing employee interests and human resource development, while important in some organizations, are rarely the primary governing objectives of business organizations.

- Business growth is important to organizations. Business growth is most desirable in sales, customer volume, revenue growth, market share, and other indicators of business growth such as number of employees, growth of business sites and facilities, and geographical expansion.
- Economics and finance are the primary basis for measuring business performance.

The following are conditions from the HRD perspective. The conditions from an HRD perspective follow.

- A primary focus of the HRD field is on human relationships and improving the effectiveness of human interaction.
- The methods and models of HRD are predominantly process-oriented. Based on theories of adult learning and organization development, HRD's strength in the enhancement of workplace processes is reflected in attention given to the learning process, enculturating employees to work environments, process consultation as an OD intervention, process improvement as a key feature of TQM, and other process-oriented efforts at the individual, group and organizational levels.
- Psychology and psychometrics is the primary basis for measuring work performance.

Phase 4: Construct Models of the Relationship. A model of the relationship between innovation and interpretations of the conditions and factors related to innovation is presented in Figure 1. The model has two axes—the horizontal axis represents the innovation process and the vertical axis represents the main sources of knowledge and development that fuel innovation. The horizontal axis represents the innovation process from the initial gathering of information for innovation to the final implementation of a new concept, whether a product, process or service. Fiol's (1996) model of the innovation process was used for each of the three innovation process column headings. Acquisition of knowledge addresses the process of scanning the internal and external environments for knowledge relevant to innovation and the absorptive capacity of the organization to identify and acquire the knowledge. Diffusion of knowledge refers to the range of processes and systems used to disseminate knowledge throughout the organization. New product development refers to the speed and methods by which organizations bring new ideas to product/process development and commercialization.

The vertical axis of Figure 1 represents the main sources of knowledge and development that fuel innovation. These loci of knowledge and development exist inside and outside the organization in individuals, groups, the organization, and in the environment.

Figure 1. A Model of Innovation

--------------------THE INNOVATION PROCESS-----------------------

	A. Acquisition of Knowledge	**B. Diffusion of Knowledge**	**C. New Product Development**
1. Individual	A1	B1	C1
2. Group	A2	B2	C2
3. Organization	A3	B3	C3
4. Environment	A4	B4	C4

LOCUS OF KNOWLEDGE
DEVELOPMENT

Phase 5: Elucidate the Fundamental Contradictions. The model in Figure 1 provides an integrated view of the distinctive ways in which the research perspectives of HRD and management differ with respect to the study of innovation. HRD and management research was reviewed to examine the values and goals of each discipline with respect to innovation. All articles from two top refereed journal in each field, the Academy of Management Review for management, and Human Resource Development Quarterly for HRD, were reviewed for the four-year period 1994-1997. A total of 101 management articles and 94 HRD articles were reviewed. A majority of recent scholarly work in management and HRD purports to have at least some influence on the generation of new, useful ideas in organizations. Consequently, no attempt was made to exclude articles in these journals from review based on their titles.

Each article was assessed against the two major constructs in Figure 1, its relation to the innovation process and its attention to the loci of knowledge/development. The topic and research questions of each article allowed classification into the phase(s) of the innovation process most appropriate for each article. Each article was also categorized by the locus/loci of knowledge and development to which the article was directed (i.e., the organizational level(s)—individual, group, and so on—at which the research was framed). Thus, all articles were mapped onto Figure 1 yielding patterns representative of the different perspectives on innovation taken by management and HRD research.

HRD Research. A majority of HRD research was primarily concerned with the vertical axis on the left side of Figure 1—the development of individuals, groups and organizations. Each locus of knowledge/development (i.e., individual, group, organization, environment) was addressed by HRD research in studies of career development, diversity and multicultural issues, job skills, performance improvement, organization development, the learning organization and in other areas.

Relative to this strong focus on knowledge and development, very little HRD research examined how knowledge and development contribute to innovation, particularly in the later stages of innovation (i.e., new product/process development). In addition, only five research articles in the last four years addressed the process of scanning the internal and external environments for knowledge relevant to innovation as an HRD activity. The acquisition of knowledge in a majority of HRD research has to do with the cognitive and learning processes, not with the strategic acquisition of knowledge. While HRD research seems appropriately focused on development, less attention is given to the innovation and entrepreneurial context within which development occurs. Few studies explicitly link developmental activities to innovation in a way that allows HRD to take credit for the success associated with organizational innovation.

Management Research. Management research primarily addressed the innovation process represented by the horizontal axis in Figure1. Most of the 101 studies reviewed addressed topics and research question related to innovation and entrepreneurship, strategic management, and organization theory. Development issues, when addressed at all, were secondary to this topics.

Given its attention to innovation and other business processes, management research emphasizes some aspects of the innovation process, particularly the acquisition of knowledge and new product/process development, more than the diffusion of knowledge. Management research involving activities such as organizational visioning, environmental scanning, portfolio analysis, strategic planning, benchmarking, and market analysis are examples of attention to acquisition of knowledge at the organization and environmental levels.

Management research gives relatively less attention to diffusion of knowledge as part of the innovation process. Research addressing the diffusion of knowledge is largely the domain of management information systems (MIS), which emphasizes a systems approach to information management more than the developmental value of information.

Phases 6 and 7: Provide Programs of Education and Action. Phases 6 and 7 of critical science research provide programs of education that give participants new ways of seeing their situation, and provide programs of action to change social conditions and engender new understandings. As applied to the study of innovation, critical science research yields the following guidelines for future organizational innovation research.

Implications for Research

Implications for Future Management Research. Management research leads other academic disciplines in the study of organizational innovation. However, management research will not reach the core of innovation to discover how entrepreneurial creativity is catalyzed and supported without more research attention to developing the human potential for innovation and to creating the conditions that support it. This requires studying the subtle dynamics of the origin and growth of innovative ideas (for example, see Robinson and Stern, 1997) and characteristics of the individuals and organizations where innovation thrives. Management research would be well served by following the prescriptions of Van de Ven (1986) to generate new insights into the "human problem of managing attention" and the "process problem of managing ideas into good currency." Similarly, Nevis, DiBella and Gould (1995) advise managers to encourage risk-taking, tolerate failure, and create "a climate of openness" as ways to support innovation.

Management research that addresses the diffusion of knowledge and organizational processes for disseminating information is largely restricted to the study of management information systems. A notable exception to this is the recent attention given by management scholars to organizational learning (Garvin, 1993; Senge, 1990; Nevis, DiBella and Gould, 1995).

Implications for HRD Research. Amabile's definition of innovation, given earlier in the paper, provides for the application of useful, new ideas to the products or services themselves, (b) identifying a market for the products or services, (c) ways to produce or deliver the products or services, and (d) ways to obtain resources to produce or deliver the products or services. Few studies reviewed for this research effectively link HRD with the development of innovative products, processes, and services. Despite the recent emphasis on realigning the HRD profession into a performance enhancement role, research has not demonstrated HRD's influence on any aspects of the innovation process suggested in the later part of Amabile's definition. HRD's research efforts have focused on development, often with peripheral regard for the business needs of its HRD stakeholders. This is despite professional exhortations to the contrary—McLagan's landmark study of the HRD profession, Models for HRD Practice, identified business competencies as one of four major skill sets for HRD professionals, and more recently, the profession renewed its call for developing HRD's performance enhancing capabilities (Rothwell, 1997).

Should research give more attention to HRD's influence on core business processes such as innovation? A key finding of this study is that HRD does not have to relinquish the value it adds in developing human potential to more effectively frame its efforts within the context of innovation. That is, HRD studies can be more directly linked to the innovation process axis of Figure 1 without diminishing its emphasis on development (the vertical axis in Figure 1). Simply stated, HRD is capable of both developing people and advancing the organization through innovation.

Researchers can reframe HRD's strong developmental emphasis within the more powerful context of innovation, assisted by the following guidelines.

- HRD research should continue to pave the way for the true integration of learning and working. Research can demonstrate the value of HRD's role in the development of skills in strategic areas such as visioning, business planning, consensus building, and other areas crucial to innovation. Research should identify leverage points for HRD's active participation in the strategic redirection of organizations.
- Explicate HRD's role in advancing the competitive position of the organization. Promising, yet untapped areas in this regard are the analysis of industries, markets, technology, and innovative work designs and business processes related to organizational growth. These are not simply topics for management development, but rather, areas in which HRD should be developing all employees.
- Frame HRD as a catalyst for human creativity within a meaningful business context. Given HRD's tenuous links to business outcomes, innovation is likely the best area for HRD to emphasize its focus on human development. Research must extend the reach of

HRD's influence all the way through to the successful implementation of creative ideas. As Amabile's work and other recent research on innovation suggest, the generation of ideas is not enough. Useful ideas must be implemented to produce new business opportunity. Research must show how HRD can both catalyze useful, new ideas and facilitate their successful implementation.

References

Aiken, M., Bacharach, S. B. & French, J. L. (1980). Organizational structure, work process, and proposal making in administrative bureaucracies. Advanced Management Journal, 23, 631-652.

Amabile, T. M. (1997). Entrepreneurial creativity through motivational synergy. Journal of Creative Behavior, 31(1), 56-69.

Carr, W. & Kemmis, S. (1986). Becoming critical: Education, knowledge and action research.London: Falmer Press.

Comstock, D. E. (1982). A method for critical research. In E. Bredo & W. Feinberg (Eds.) Knowledge and values in social and educational research. Philadelphia: Temple University Press.

Cooper, H. M. (1982). Scientific guidelines for conducting integrative research reviews. Review of Educational Research, 52(2), 291-302.

Cooper, H. M. (1989). Integrating research: A guide for literature reviews (2nd ed.). Newbury Park, CA: Sage.

Dill, D. D. & Friedman, C. P. (1979). An analysis of frameworks for research on innovation and change in higher education. Review of Educational Research, 49, 411-435.

Drucker, P. F. (1973). Management: Tasks, responsibilities, practices. New York: Harper & Row.

Dubin, R. (1978). Theory building (2nd ed.). New York: Free Press.

Fay, B. (1977). How people change themselves: The relationship between critical theory and its audience. In T. Ball (Ed.), Political theory and praxis: New perspectives. Minneapolis, MN: University of Minnesota Press.

Garvin, D. A. (1993). Building a learning organization. Harvard Business Review, July-August, 78-91.

Isaksen, S. G. (Ed.). (1987). Frontiers of creativity research. Buffalo, NY: Bearly Limited.

Jackson, G. B. (1980). Methods for integrative reviews. Review of Educational Research, 50(3), 438-460.

Kuhn, R. L. (1993). Generating creativity and innovation in large bureaucracies. Westport, CT: Quorum.

Moch, M. & Morse, E. (1977). Size, centralization, and organizational adoption of innovations. American Sociological Review, 42, 716-725.

Nevis, E. C., DiBella, A. J. & Gould, J. M. (1995). Understanding organizations as learning systems. Sloan Management Review, Winter, 73-85

Robinson, A. G. & Stern, S. (1997). Corporate creativity: How innovation and improvement actually happen. San Francisco: Berrett-Kohler.

Rothwell, W. J. (1996). ASTD models for human performance imporvement. Alexandria, VA: American Society for Training and Development.

Rogers, E. M. (1983). Diffusion of innovations (3rd ed.). New York: Free Press.

Senge, P. M. (1990). The fifth discipline. New York: Doubleday Currency.

Schumpeter, J. A. (1942). Capitalism, socialism, and democracy. New York: Harper & Row.

Van de Ven, A. H. (1986). Central problems in the management of innovation. Management Science, 32(5), 590-607.

Van Gundy, A. (1987). Organizational creativity and innovation. In S. G. Isaksen (Ed.), Frontiers of creativity research. Buffalo, NY: Bearly Limited.

Weick, K. E. (1989). Theory construction as disciplined imagination. Academy of Management Review, 14(4), 516-531.

Whetten, D. A. (1989). What constitutes a theoretical contribution? Academy of Management Review, 14(4), 490-495.

Leaders Behaving Badly: How to Block Innovation in Organizations

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This study compared leadership and corporate creativity. A total of 1871 critical incidents describing leadership behaviors were gathered from 761 managers and non-managers representing 469 different organizations in the U.S. and Canada. Five leadership factors described as the CLIMB model were compared with Robinson and Stern's six factors to determine how leaders can block innovation. Implications are given for needed research and for HRD practice.

American corporations face new economic, social, and environmental circumstances requiring new and different responses. Past approaches will no longer work. Because market competition rewards the superior product, service, or process, successful organizations are now seeking ways to promote innovative thinking among their employees. Such statements are not at all radical or new. Indeed, Kanter (1983) emphasized the importance of innovative problem solving. Similarly, Van de Ven (1986) reported that repeated meetings with chief executive officers of public and private organizations revealed management of innovation as the most central concern.

One approach to investigating innovation in an organizational setting involves examination of structural and cultural factors. For example, Feldman (1988) examined both organizational culture and broader social and historical processes as they affected attitudes toward and capacity for innovation. Later, Hemmasi, Graf, and Kellogg (1990) identified industry structure characteristics, such as industry growth, related to executives' perceptions of competitor's rate of process innovation. More recently, Drazen and Schoonhoven (1996) reviewed and introduced a series of research articles examining community, population, and organization effects on innovation. Both structural characteristics and perceptions of competitors were, in turn, related to profitability.

A second approach to research on innovation and creativity focuses on the great idea-generators, such as Thomas Edison or Albert Einstein. Indeed, Max Wertheimer's classic book on Productive Thinking (1945) discusses Gauss, Galileo, and Einstein. Such case studies of geniuses were designed to help identify the key components of innovative thinking. However, the notion of the independent thinker and inventor, typical at the end of the 19th and the beginning of the 20th centuries, appears to have been replaced by innovations created within a corporate setting (Hughes, 1989; Robinson & Stern, 1997).

Rather than focusing on geniuses only, Robinson and Stern's work (1997) on corporate innovation recognizes that ordinary individuals also make important contributions. Their work shows that corporate creativity or innovation does not typically emerge from individuals working in isolation. Furthermore, they identify six factors influencing corporate creativity: alignment, self-initiated activity, unofficial activity, serendipity, diverse stimuli, and within-company communication. Recognizing the contributions of ordinary people working with others, we will adopt Van de Ven's definition of innovation. Innovation is "the development and implementation of new ideas by people who over time engage in transactions with others within an institutional context." This definition appears compatible with those proposed by Thompson (1965) and Kanter (1983).

The hypothesis of the proposed project is that the factors influencing corporate innovation and creativity are similar to competencies identified as important for leaders in organizations. Thus, the purpose of the present study was to identify leadership competencies among people at all levels in an organization and to relate these competencies to factors affecting corporate innovation and creativity. The research questions are: What are leadership competencies needed in today's organizations? To what extent are these leadership competencies similar to or congruent with the factors influencing corporate innovation and creativity as identified by Robinson and Stern (1997)?

Methodology

Subjects. Respondents came from a variety of organizations, including heavy manufacturing, high-tech manufacturing, financial services, health and social services, business services, retail and distribution, transportation and utilities, government, and education. The study included

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organizations ranging in size from fewer than 250 employees to more than 10,000 from all of the major regions of the U.S. and Canada. These organizations all had one thing in common: all had seen above average growth in the number of employees over the past three years.

Interviewers contacted 915 organizations and completed interviews at 469 organizations (slightly more than 50%). One or two managers or one or two non-managers were interviewed at each of the cooperating organizations. The total sample size was 761, with about half as managers and half as non-managers.

Materials. The interviewers asked two main critical incident questions (e.g., Flanagan, 1954, 1974):

> Think of a time in the past month when a person in your organization showed good leadership. What did the person do that showed good leadership? What was the result of this behavior? What was the person's position in your organization?
>
> Think of a time in the past month when a person in your organization showed poor leadership. What did the person do that showed poor leadership? What was the result of this behavior? What was the person's position in your organization?

In addition to the questions on leadership, interviewers asked questions regarding the characteristics of the respondent, such as job title.

Analysis. The responses to each question were entered into a database along with information identifying the characteristics of the participants. Each incident identified as "critical" by the respondent, or judged by the analyst as so intended, was considered as a separate event. If a response included more than one incident, duplicates of the entire response were entered as a separate incident. This procedure permitted the analyst to review the different incidents for classification purposes, while still being able to identify the entire response.

A total of 1871 usable critical incidents were obtained from the sample. Of these incidents, 1264 described the actions of a manager or supervisor and 607 described the actions of a non-supervisor. The only responses not used in the analysis were those that were clearly not an incident or were uninterpretable.

The analysis of the incidents followed the guidelines set forth by Flanagan (1954, 1974). The steps included the following:

1. Selecting a general frame of reference.
2. Sorting a sample of incidents into a few piles in accordance with the frame of reference selected.
3. Formulating tentative headings for major areas.
4. Sorting additional incidents into these major areas and setting up new subcategories as necessary. During this process all incidents considered so similar that they would remain together regardless of changes in category definitions were clipped together and treated as a unit.
5. Preparing tentative definitions for major headings and generalized statement for each of the main categories of incidents.
6. Making a tentative selection of the level of specificity-generality to be used in reporting the definition.
7. Redefining major areas and categories as necessary while incidents were being classified.
8. After all incidents had been classified, reviewing definitions and revision where necessary.
9. Recording the classification of each incident.
10. Having an independent check made on the classification of all incidents.

Russ-Eft (1995) suggests that competencies can be thought of as though they are embedded components of a molecular structure of human behavior. In such a model, the behavioral indicators called critical incidents comprise the "sub-atomic particles." These critical incidents can be classified into larger units called competencies or 'atoms." Such competencies can be classified into a larger set of competencies or "elements." Finally, a set of competencies can be classified into an even larger set or "molecules".

Thus a number of critical incidents, or behavioral indicators, or "sub-atomic particles," such as "Got the staff connected to PC systems without being given step-by-step directions" and "Single-handedly started recycling projects throughout the company," were grouped into a competency labeled "Takes initiative to solve a problem." These, in turn, were placed, along with other lower-level competencies (such as "Implements good ideas," "Works extra hours or unsupervised," and "Helps others") under a broader competency, such as "Taking Responsibility."

The critical-incident methodology did not involve a statistical analysis of a representative sample. The purpose was not to identify the most frequently mentioned leadership attributes, but rather to uncover the full range of critical attributes that make up leadership, regardless of organizational level.

Results

Fifty different competencies for universal leadership behavior emerged. These competencies, in turn, were grouped under 17 larger competencies. These 17 competencies, in turn, were associated with five major factors: Create a compelling future, Let the customer drive the organization, Involve every mind, Manage work horizontally, and Build personal credibility (or the **CLIMB** model). Table 1 presents a description of the 17 competencies by each of the five **CLIMB** factors. Note that the description provides details on the negative incidents in that factor and competency.

Table 1

CLIMB Factors and Descriptions

CLIMB Factors and Competencies	**Description of Leadership Competencies**
Creating a compelling future	98 positive & 31 negative incidents
Setting a vision	**Negative**: provides no vision; does not articulate goals or plans; lets outsiders chart course; doesn't support the vision
Managing a change	**Negative**: does not support a change; does not share information about a change; does not plan for change; does not involve others in the change effort
Let the customer drive the organization	44 positive & 22 negative incidents
Focusing on the customer	**Negative**: inflexible; unresponsive to customer; makes decisions without considering customer; places own convenience ahead of customer; ineptness affects the customer; complains to customers; upsets or angers customers
Involve every mind	494 positive & 434 negative incidents
Dealing with individuals	**Negative**: bad attitude toward others; berates; belittles, degrades; criticizes destructively or in front of others; micro-manages; talks behind one's back; fails to do the positive
Supporting teams and groups	**Negative**: hinders meetings, etc.; fails to do the positive
Sharing information	**Negative**: does not share needed information; does not share information at the right time; provides incorrect information; provides information in inappropriate manner.
Solving problems and making decisions	**Negative**: avoids decisions; doesn't get enough information; reverses or overrides a decision; fails to solve a problem
Manage work horizontally	181 positive & 130 negative incidents
Managing business process	**Negative**: fails to manage procedures or ongoing activities within and between groups; fails to promote consistency or efficiency between groups; does not cooperate/coordinate in inter-group activities; does not support or stick to procedures
Managing projects	**Negative**: fails to manage the "non-people" aspects of projects; fails to secure human and material resources; does not complete an effort successfully (in time/budget); unrealistic planning; constant change in schedule; shows no commitment to project

Table 1

CLIMB Factors and Descriptions (Cont'd.)

Displaying technical skills	**Negative**: makes technical errors; takes an unprofessional approach; ignores proper procedures; displays bad attitude toward work; does not work competently; lacks knowledge or understanding; poor quality work; does not support technical training.
Managing time and resources ·	**Negative:** fails to meet deadlines; does not use good time management; does not use resources wisely; fails to plan for a person's departure or absences.
Build personal credibility	264 positive and 173 negative incidents
Taking responsibility	**Negative**: "passes the buck;" oversteps authority; absent when needed (e.g., "goes fishing"); blames others; doesn't act when action is required; reactive, not proactive; doesn't stand firm
Taking initiative beyond job requirements	**Negative**: doesn't measure up to what is expected; doesn't offer help; won't do more than absolutely required
Handling emotions	**Negative**: blows-up; loses temper; falls apart under stress; loses control; fails to handle emotional situations
Displaying professional ethics	**Negative**: lies, cheats; show unfairness or favoritism; displays illegal actions; makes off-color jokes, threats; discusses confidential information; talks behind someone's back
Showing compassion	**Negative**: antagonizes someone under personal stress; fails to show sympathy and compassion; fails to guide someone with personal problems.
Making credible presentations	**Negative**: does not speak persuasively; fails to convey important, correct information; does not prepare well

These five factors were then associated with the six dimensions identified by Robinson and Stern (1997) as critical for corporate innovation and creativity. Table 2 presents that comparison, followed by a discussion of each pair of factors.

Table 2

Comparison of Robinson and Stern's Six Factors for Corporate Innovation and Creativity with the Five CLIMB Factors of Leadership

CLIMB Factors of Leadership	**Robinson and Stern's Factors for Corporate Innovation and Creativity**
Create a Compelling Future	Alignment
Let the Customer Drive the Organization	Diverse Stimuli
Involve Every Mind	Serendipity
Manage Work Horizontally	Within-Company Communication
Build Personal Credibility	Self-Initiated Activity
	Unofficial Activity

Create a Compelling Future / Alignment. Robinson and Stern (1997) suggested that clarity

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about the key goals of the organization and commitment to initiatives promoting those goals are needed for alignment. But, if leaders want to block innovation and creativity, the critical incident data show that being unclear or secretive about the organization's goals can be very effective. The following excerpt from an incident is simply one example:

> The direction is not clear. We're not brought in. We feel left in the dark. We're pessimistic about the future.

Since corporate creativity is sensitive to knowledge about the organization's goals and directions, a leader can make great strides toward reducing an organization's ability to innovate. Simply do not create a vision of the future, or make it very fuzzy and incomprehensible.

Let the Customer Drive the Organization / Diverse Stimuli. Robinson and Stern (1997) suggested that innovation depends upon stimuli from a variety of sources. One important source is that of the customers of the organization. By preventing interaction with customers and by being inflexible with customers, a leader eliminates an important source of information that can yield important innovations for the organization.

> Our organization had an opportunity to do extensive computer training for a local hospital. The person who gives permission for the activity … killed the project…It showed that we were inflexible and not responsive. It reinforced with employees that there are always roadblocks when something new is suggested.

This statement provides an incident that helped to block innovation within an organization, both at the time and perhaps in the future.

Involve Every Mind / Serendipity. Serendipity (as defined by Horace Walpole in 1754 – based on the Persian fairy tale The Three Princes of Serendip) combines a fortunate accident with sagacity. As Robinson and Stern (1997) indicate, people in organizations must be aware that accidents do occur and that sagacity can transform those accidents into fortunate accidents, increasing corporate creativity. Thus, to reduce an organization's ability to innovate, the leader must take greater control. This control helps others understand that their contributions are not really valued.

> He told us what needed to be done, how it needed to be done, and never explained why or gave us any latitude to make our own decisions. We didn't put our whole hearts in the project, and as a result, it was a medium job.

This incident suggests how effective a leader can be in reducing creativity and innovation:

Manage Work Horizontally / Within-Company Communication. Both the leadership data and Robinson and Stern's work suggested the importance of cross-functional understanding and communication. To block innovation, leaders must prevent employees from understanding and working with other functions. The following comments what can result:

> We waste time and end up with rework.
> Nothing ever gets resolved.

By preventing cross-function understanding and work, the organization can spend its resources solving the same problems again and again.

Build Personal Credibility / Self-Initiated Activity and Unofficial Activity. The last CLIMB factor, that of Build Personal Credibility on the part of the leader can thwart or can lead to Robinson and Stern's two factors of "Self-Initiated Activity" and "Unofficial Activity." The following incident suggests how these are connected:

> He was only working for power. He utilized original ideas of his employees and colleagues to his benefit.

The incidents and competencies within the factor, Build Personal Credibility, show a direct relationship with the two Robinson and Stern factors. Leaders who fail to display personal credibility find that followers are far less likely to undertake self-initiated activity and unofficial activity.

Implications for HRD Practice

This study implies that leaders throughout an organization can block (or conversely stimulate) corporate creativity and innovation. Furthermore, the study provided some specific examples of behaviors that can block such creativity. HRD practitioners can use this research to help organizations to improve both leadership and corporate innovation and creativity. Practitioners can use the negative incidents to grab attention and to point out some of the undesirable consequences. Indeed, this study may help some to identify the importance and consequences of leadership behaviors and competencies. Practitioners can help leaders formulate approaches that yield more positive results, both in terms of leadership and corporate creativity.

Furthermore, the critical incident study results indicated that both managers and non-managers can display leadership behaviors blocking or supporting innovation. HRD professionals can use these results to undertake developmental efforts to encourage leadership behaviors that focus on both managerial and non-managerial employees. By encouraging leadership among all employees, the organization can experience multiple levels of innovation.

Implications for HRD Research

Researchers may want to examine the relationship between leadership and corporate creativity more intensely. Perhaps researchers might consider undertaking a simulation to determine whether, indeed, such negative leadership behaviors do block innovation. As an example, we might consider the factor of Create a Compelling Future portion of Robinson and Stern's element "Alignment." They suggested that "Alignment" was the most critical factor affecting corporate creativity. O'Brien (1997) reported on an experiment to get executives to "write a mission statement which is so impossibly complicated that it has no real content (p. 10)." The experiment was successful, as judged by the experimenters, but further research could have determined the level of confusion among employees and some possible implications.

An alternative approach would be to correlate measures of the factors with some indicators of corporate creativity. Perhaps one could obtain ratings of employees on the various factors and correlate those with customer and competitor ratings of the organization's level of innovation and creativity.

Another line of inquiry involves the evaluation of practitioner interventions to improve both leadership and innovation. The results of this study suggest that, by improving leadership behaviors, corporate innovation and creativity should improve. Thus, corporate innovation and creativity can become an outcome measure to determine the effectiveness of leadership development interventions.

References

Drazin, R., & Schoonhoven, C.B. (1996). Community, population, and organization effects on innovation: A multilevel perspective. Academy of Management Journal, 39, 1065-1083.

Feldman, S. (1988). How organizational culture can affect innovation. Organizational Dynamics, 17, 57-68.

Hemmasi, M., Graf, L. A., & Kellogg, C. E. (1990). Industry structure, competitive rivalry, and firm profitability. Journal of Behavioral Economics, 19, 431-448.

Kanter, R. M. (1983). The change masters: Innovation for productivity in the American corporation. New York: Simon and Schuster.

O'Brien, T. (1997, November 16). Mission: Impertinent. West, 10-15.

Robinson, A. G., & Stern, S. (1997). Corporate creativity: How innovation and improvement actually happen. San Francisco, CA: Berrett-Koehler.

Thompson, V. (1965). Bureaucracy and innovation. Administrative Science Quarterly, 10, 1-20.

Van de Ven, A. H. (1986, May). Central problems in the management of innovation. Management Science, 32, 590-607.

Wertheimer, M. (1945, 1959). Productive thinking. New York: Harper & Row.

Coaching: Facilitating the Training of Subject-Matter Specialists. Development and Evaluation of an Andragogical Model of Continuing Vocational Education

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Continuing vocational education is most often offered by subject matter specialists with limited andragogical competencies. To improve their andragogical abilities a model was constructed in which a professional andragogue coaches the subject matter specialist before, after, and directly in their courses. The implementation and evaluation of about 70 coachings opened new insights in the problems of vocational training, clarified the role andragogues can play in this context, and confirmed - though limits were found - the helpfulness of the coaching model.

Research in Germany shows that subject-matter specialists with little or no andragogical competencies - educational amateurs - offer most of the continuing vocational education and in-service-training in companies. Because of the complexity and specifics of the training contents and of their company-related expertise, companies need these subject-matter specialists and practitioners as trainers. But the short-time instructional effect as well as the long-time readiness for lifelong and lifewide learning remains limited. Educational training of these subject-matter specialists often is not the answer for this problem: Either it is not available, not effective enough, or can not be justified when a practitioner is teaching only a few hours.

Research Questions

Given this situation the research question is how to improve the quality of perception, planning, performance, and evaluation of training by training-amateurs in companies. This question not only includes the problem of higher effectiveness of the training measures but also of a transformed perception of training as personnel and organizational development within the culture of a company.

On a first level this is a practical developmental task: How can andragogical competency be brought into courses, when subject matter specialists are needed because of the complexity of the subject, but have no andragogical competency at their disposal?

On a second and more conceptual level this means to clarify the role(s) of the person(s) delivering continuing education: How is the transmission of knowledge and skills interwoven with the transformation of values and attitudes?

And finally the evaluation question has to be asked: Is such a model successful, and where are the limits?

Methodology: Model-Construction

To answer these questions a traditional educational research strategy was used: the construction and experimental implementation of an educational/andragogical model.

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Although the construction of a model is widely used in the history of education (i.e. John Dewey, Alexander Neill, Peter Petersen, Paulo Freire) it is often not perceived as a research strategy. The reason may be that we see these models (i.e. project learning, Summerhill-school, Jena-Plan-Schule, dialogic learning) as finished results and oversee the beginning implementations with its uncertainties, failures, corrections, and re-designing of practice and theory. The tentative implementation of an educational model makes it necessary to match theory with a convincing practice, and unexpected practice calls for explanation and theory. So the construction and implementation of a model is a systematic access, yet open for surprising incidents, for new or better knowledge combined with experientially tested practical results. In this function it is a research method.

The advantage of the construction of an educational model as research strategy is that

(a) in the process of developing, implementing, and evaluating the model the practicability and usefulness of the developed method is tested,

(b) in the necessary interaction between theory and practice the underlying concepts have to be clarified, and that

(c) this holistic and qualitative approach supplies the researcher with "observation within context".

Within this experiential setting empirical data (qualitative and quantitative) were collected by participatory observation in about 70 courses, by semi-structured interviews with about 70 subject matter specialists and their coaches, and through a rating scale (CERAS, Reischmann 1996) developed for this project for participants of the courses.

Theoretical Framework

Like in most situations of practical problem-solving a bundle of theories were included:

One theory this development was based on is the person-centered approach of Carl Rogers (Freedom to Learn, 1969): Learning has to be meaningful to the learner, should happen in a non-threatening environment, is supported by doing, is more successful when the learner can influence the learning content and method and take over self-responsibility, and focuses not merely on knowledge, but also emotions. In this theory we found a concept that was founded more on counseling, more on facilitating learning than instructing.

Allen Tough's work on "The Adult's Learning Projects " (1979) indicates, that most of the learning of adults happens in settings more similar to normal life than to formal schooling, and that adults undertake learning projects when real-life problems call for solutions. This corresponded to our observation, that shortly before and while the subject matter specialists were delivering their courses they were very willing to ask for support. Such an individual time-schedule could not be answered with formal training offerings, but needed individualized and flexible settings.

Malcolm Knowles' concept of "Andragogy" (i.e. 1979, 1984) developed over three decades a theory that focused on the specifics of the adult learners: their self-concept, experience, learning-readiness, time perspective and orientation to learning. Especially helpful is that he takes into account also the learning in and for the workplace. Working with the training demands of subject matter specialists which often are high-ranked specialists in their company makes it indispensable to refer to these specifics.

Several concepts were available that contributed to the perception of the described task: Peer-counseling, team-teaching, mentoring, or supervision. In addition we found that Joyce/Showers (1981, 1982) described experiences with the coaching process related to teacher-training clearly and promising. Also modern staff development theories which focus on cooperation, self-directedness, and self-responsibility influenced the theoretical framework of our work.

The Model: Coaching the Subject Matter Specialist

To increase the quality of vocational training a "tandem"-situation was developed: the subject matter specialist is individually "coached" by an adult educator before, during, and after the course.

Interviews in a pre-study with six IBM managers had shown, that "Coaching" is a term widely used for various concepts and contents - every modern strategy seems to be labeled "coaching". So first a distinct concept of coaching was formulated:

With "coaching in continuing education" we label a training situation in which the subject matter specialist is supported by an adult educator in planning and conducting one specific course. The content competency and the andragogical competency are brought into a course by two separate persons. The subject matter specialist remains responsible for the content, while the adult educator helps him/her to design and conduct the course in a way that facilitates learning. This coaching is seen as an individualized support for limited time: coaching lasts between three and eight sessions; after that the subject matter specialist goes on again on his own. This limitation keeps both aware that the training is and remains within the responsibility of the subject matter specialist, and that the coaches offerings are a passing chance.

The activities of the adult educator as a coach are: Before and during the course (pre-coaching) he/she helps to design the course and the sessions. After the sessions (post-coaching) he/she gives feed-back and helps to plan the next session. This resembles traditional counseling and supervision. Also the coach is present in the course for observation which supplies the information for feedback. In these activities the coach offers as well clarification as information: Clarification why processes develop(ed) in a certain way, information about methods and how to handle them. In addition - and this is what is particular about our coaching - the adult educator plays an active and responsible role during the course-meetings. The coach takes over pre-planned actions like introducing the participants, giving learning-aids, introducing special methods such as group-work. Hereby the coach serves as a model. He/she also becomes spontaneously active when it seems necessary.

These activities are - first - aimed to increase the educational competency of the subject matter specialist for subsequent courses. The suggestions and feed-backs in the pre- and post-coaching are explained and give a situation-specific introduction into adult education methodology and philosophy. Theory becomes directly related to practice. The suggestions and feed-backs refer to the individual subject matter specialist, his concrete needs, the specific topic and situation. Answering real-life problems makes this exchange meaningful and related to doing. By demonstrating educational behavior directly the coaching adult educator acts as a model (Bandura) - and not the usual schoolmaster-style: telling others what they must do, while sneaking away from showing competency.

These activities are - second - aimed to increase the success of the course: directly through activities of the coach, indirectly through the teaching of the subject matter specialist improved by the coaching.

This complex andragogical activity, including counseling, observation, modeling, and supervision, we call "coaching". The difference to peer-counseling or team-teaching is, that both persons are experts - but in different fields. So there is no reason for competition: both experts do their job, trying to let the other participate in his/her competency, exchanging, sharing, caring together for the best learning success.

Of course it is not expected that such a shorttime coaching makes subject matter specialists into educational experts. Depending from which educational competencies the subject matter specialist started, coaching wants to prepare for a next step by offering genuine andragocical perspectives applied to the subject matter specialists individual training task.

How to become a "Coach"?

Coaching is executed by professional adult educators. The variety of situations and contents they are confronted with, the necessity to act and react immediately, the ability to take care of the subject matter specialist as well as the participants makes it inevitable that they have at their disposal a wide variety of educational theories and methods. And it is necessary that they are able to intervene in a style and mood that does not offend or threaten either the subject matter specialist or the participants. Counseling competence is helpful for this.

For persons who studied adult education (mostly students of our department) and for experienced practitioners (two major car-manufacturers) we developed four days of training. About 150 persons going through this training reported after their first practical coaching experience that they were able to apply the basic coaching-ideas and coaching-strategies after this training.

Results and Conclusions

More than 150 coachings by different coaches have been accomplished. Besides the direct experiences, qualitative and quantitative data were collected.

Experiences with the implementation: The first of the implementation experiences is, that institutions and subject matter specialists often hesitated to try this arrangement. They found the idea convincing, but either regretted that „Right now I have no suitable training" or did not want to do it themselves: „I know somebody who would really deserve coaching". There seems to exist a high level of fear to allow somebody to observe training. But when one or two trainers could be convinced, then based on their experience other trainers asked for coaching.

A specific difficulty was the activity of the coach in the courses. Only half of the subject matter specialists allowed this, the other half limited the attendance of the coach to observation. Teaching and training as a cooperative venture seems unthinkable for many trainers, thus continuing the image of the lonesome fighter.

An unexpected but repeated observation was the divergence between how subject matter specialists described their planned courses and how they acted in the real course situations. Counseling and supervision, relying on the description of the actor, seem after this experience often based on unrealistic data.

In a certain type of training, coaching was more or less impossible: In "high-pressure-lectures" when the subject matter specialists were oriented solely to presenting their content, and when they wanted to present too much content. The subject matter specialist neglected even simple arrangements planned in the pre-coaching, for example taking a break. By trying to interfere the coach was made responsible for the fact that not all material could be presented - which made the subject matter specialist nervous as well as the participants. Here we learned to withdraw to pre-coaching and reviews/feedback as interventions.

Besides these limitations coaching was found to be applied in a wide variety of courses. Various contents (hard technical or soft creative) could be coached as well as different participants (managers or apprentices) or training schemes (full day or 90-minute units, long-planned or shortly started). It also turned out that our type of coaching was applied not only in companies, but in adult education centers, religious institutions and military education, even in schools and at university (my students coached each other in seminar-presentations). And surprisingly it made sense not only for inexperienced trainers we had designed it for, but also experienced and trained teaching-specialists reported positive experiences. Some coaches even reported that they transferred strategies of our „coaching in continuing education" to learning situations which had to do nothing with teaching courses, like helping managers handling staff or customer problems.

Qualitative Evaluation: At the end of each coaching subject matter specialists were asked for written feedback about their perception of the coaching situation (process) and the results they see for their future courses (product). Similarly the coaches delivered a report. Reports of about 70 coachings are available. Also participants of these courses were interviewed.

The counseling in the pre-coaching and review situation was very positively evaluated. "I absorbed the methodical and didactic suggestions like a dry sponge ... I could have reduced my preparation to half, if I had the coaching earlier".

Interviews with the subject matter specialists showed that the presence and activities of the coach during the courses were seen ambivalently. As described only half of the subject matter specialists allowed the coach to become active in the course. When coaches could become active the subject matter specialists often criticized that the additional structuring and repeating by the coach cost extra time. Positive statements were made about the coachs activities (for example: preparing the chairs and tables, activating the participants, introducing participants by name, presenting visual aids, introducing breaks, and helping individually). A surprising number of didactic operations of the coaches were perceived and named in the final interview. It seems, that the subject matter specialists used these times of non-activity - as intended - to observe the educator in a relaxed mood: "I could observe your dialogue with the participants by standing aside".

Intended consequences for future courses were reported by most of the subject matter specialists. That included certain operations - introducing the participants, structuring the presentation, including exercises, taking breaks, using visual aids, reducing and concentrating the content - , but also more general attitudes: "to make more personal contact", "to include the participant more in the course", "I conducted the course as a mathematician, not an educator ... That I want to change", "What I learned is to keep an eye on the learners", "there remained a lot of ideas that are helpful in a course - just the knowledge, how many possibilities a trained educator has, that are not available to an engineer". Of course we do not expect that all these intended consequences will be practiced in the next course. But our evaluation shows that our coaching opened the eyes of the subject matter specialists for educational ideas and operations.

We also asked for feedback from the participants. In the "high-speed lectures" we could not get much feedback. Here coaching was often perceived as an intrusion in a closed system: One subject matter specialist reported that participants complained that the coach going to the blackboard was insolent.

But most other courses found the presence of two persons surprisingly normal, although they recognized, that there was no perfect team-work between the subject matter specialist and the educator.

Quantitative Results: For the quantitative evaluation, four pair of courses were used in a pre-experimental design (Campbell/Stanley 1967): When a course is repeated (same content, same course leader, other participants), the second course was coached and the first used for control. Using CERAS (Course Evaluation Rating Scale) the dimensions "perceived learning success", "experienced learning support", "climate", and "readiness for further learning" were controlled.

The dimension "perceived success" did not show much difference, while in the three other dimensions the coached courses scored better. An explanation for the similar rating in dimension "learning success" could be that the coaching activity repeatedly activated the participants to control their learning success. This made them aware of gaps and failures, while the courses not coached left them more passive and in the uncontrolled feeling of being successful.

Respecting that the coachings were the first we did with these course leaders and lasted only between three and five half days it is positive that after such a short time already effects could be observed by the participants.

Contribution to new knowledge in HRD

A first contribution to the knowledge in HRD came even before coaching started: The direct observation of a great number of subject matter specialists as trainers nearly unanimously revealed a shocking inability of teaching. That everybody who knows something can teach it turned out as a dramatic myth!

An overt contribution is the development of an additional training scheme for the improvement of continuing education in companies combined with a way to qualify subject matter specialists for training. Our experiences so far showed limits as well as possibilities: In several settings - as described not in all - coaching could be arranged and was perceived helpful. The coached subject matter specialist reported, that they felt a lot of support through our coaching, and that they intend to change their following courses. So coaching seems to be a way to bring andragogical competency into courses.

To qualify "coaches" a four days training for professional adult educators was developed. Trained coaches reported that this enabled them to act as coach. Even more they reported that this approach influenced and changed their perception of their work in HRD in an often transformative way.

On a conceptual level the unclear term "coaching" could be clarified and discriminated against other concepts as counseling, supervision, team-teaching, or mentoring.

The "division of labor" between the subject matter specialist and the adult educator, such decomposing the teacher-role that combines didactic and subject-matter knowledge, helped to clarify the role of the adult educator. Even in technical training it became clear that in all teaching/learning context content- and attitude-learning is interwoven.

Through this experimental model it became obvious that training in a traditional way supports the "lonesome fighter" mentality. Coaching offers - for many learners first time in life - a life-example of cooperation between two equal adults.

This developed model of coaching combines theory and practice of HRD. It contributes to solve a practical problem. Even more it helps to clarify the role and importance of professional adult educators in the context of the culture of a company.

References

Campbell, Donald T./Stanley, Julian C. (1967): Experimental and Quasi-Experimental Designs for Research on Teaching. In: Gage, N. L. (Hg): *Handbook on Research on Teaching*. Chicago: Rand McNally, 171-246.

Heuschke, John A.: A Comparison of Three Transfer of Training Strategies in Inservice Adult Teacher Training. In: *Proceedings to the Midwest Research-to-Practice Conference in Adult and Continuing Education*, ed. Chere Campbell Cobbins, Madison, Wisconsin, University of Wisconsin, October 1988, 48-53.

Joyce, Bruce/Showers, Beverly (1981): Transfer of training: the contribution of "coaching". *Journal of Education*. 163, 163-172.

Joyce, Bruce R./Showers, Beverly (1981): Improving Inservice Training. In: Joyce, Bruce R./Brown, Clarc C./Peck, Lucy (Hg): *Flexibility in Teaching*. New York, London: Longman, 166-173.

Joyce, Bruce/Showers, Beverly (1982): The Coaching of Teaching. In: *Educational Leadership*, Vol 40, 4-10.

Knowles, Malcolm (1978): *The Adult Learner: A Neglected Species*. Second Edition. Houston: Gulf Publishing Company.

Knowles, Malcolm and Associates (1984): *Andragogy in Action*. San Francisco: Jossey-Bass.

Reischmann, Jost (1996): *Course Evaluation Rating Scale CERAS*. University of Bamberg, Germany.

Rogers, Carl (1969): *Freedom to learn*. Columbus, Ohio: Charles E. Merrill Publishing Company.

Tough, Allen (1979): *The Adult's Learning Projects*. Second Edition. Toronto: The Ontario Institute for Studies in Education.

Knowing the Self Through Fantasy and Imagination: Implications for Adult Learning in the Context of Work

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Recent studies suggest that work-related learning has a profound effect on our sense of self. Emergence of transformational theory within adult learning provides a framework for understanding these processes of self-knowing. Yet, research and theory is dominated by an heroic perspective, in which transformation results from effort of a rational,conscious ego. Relying on a philosophy of imagination and Jungian psychology, transformative, work-based learning is re-visioned here as a journey of soul, in which image and fantasy mediate processes of self-knowing.

A well-known professor of education once remarked, in a graduate seminar, that he doesn't like the term "learning" because it is used so loosely and no one really knows what it means. If there is such a thing as educational heresy, this statement must be a prime example of what such a sin might look like. Yet, as a student of adult learning, Professor. P's statement had a profound effect on me, engendering a healthy skepticism regarding just we do mean by learning, especially as it refers to work. Because of my prior training and experience in the health professions, Professor P's heretical claim drew me to the question of the problem of meaning in learning - what it means to really learn something and what that learning means to the person engaged in it. Within work-based learning,[1] researchers and practitioners have tended to view the idea of learning as a process of acquiring specific information and abilities to perform given skills defined by the nature of the work one does. In this perspective, understandings are objectified and meaning is treated as if it is something outside of or beyond the individual's experience. The purpose of learning, then, is for the individual to receive and acquire these named meanings as part of his or her knowledge base. The constructivist turn in education (Brooks & Brooks, 1993; Steffe & Gale, 1995), however, has challenged this preoccupation with a technical-rational view of learning. Fundamental to the constructivist perspective is the idea of learning as meaning *making* (Mezirow, 1991), processes by which individuals and groups interpret, understand, and make sense of their experiences (Jarvis, 1992), ways in which they actively confer value, quality, and purpose on their experiences (Sloan, 1983). From this point of view, meaning is *constructed* by those engaged in the leaning process, rather than passively *received* from voices of authority. Thus, learning as meaning-making is bound up with one's sense of self. Within work-based learning, making sense of our experiences is making sense of our lives, of who we are as persons. It is coming to know our selves in the context of the work we are attempting to learn to do or to do better.

Within this paper, I take as my problem the construction of self-knowledge within work-based learning. The limited amount of research and theory which addresses this problem is dominated largely by rational, socio-cognitive frameworks. Seen from this perspective, learning to work might be understood mythologically as a journey of the hero, centered in ego-consciousness. Less well developed, however, are the ways in which imagination, fantasy, and other non-egoic processes shape and influence the meaning of work-based learning. I suggest that, when viewed from this point of view, the development of self-knowledge through work-based learning represents Psyche's invitation to a different kind of mythic journey, one emanating within soul consciousness. I conclude with a consideration of what such a view of work-based learning might hold for education-for-work programs.

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[1] With the use of the term "work-based learning," I intend all forms of learning related to one's role as a worker within some organizational structure. Thus, I would include preparation programs, continuing or inservice education, apprenticeships and other on-the-job training programs. Within work-based learning, I also include informal and incidental as well as formal experiences of learning.

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The Relevance of Self-knowledge to Work-based Learning

If we take work-based learning seriously and its contribution to our sense of who we are as persons, we necessarily confront the problem of meaning in learning. As Jarvis (1992) and Mahoney (1991) point out, our notions of meaning tend to define our understandings of learning. From a technical-rational perspective, the idea of learning represents an act in which meaning has been named, objectified, and located in contexts external to the individual. Individuals learn when they provide evidence that they have taken in or internalized these external representations of meaning. This *received* view of meaning is prominent in most formal and informal programs of work-based learning. For example, much of what I was asked to do in my formal, undergraduate training to be a clinical microbiologist involved mastering meaning codified in concepts, theories, models, formulas, and facts. My more informal, inservice learning also consisted of mastering meaning codified in laboratory tests, techniques and procedures. During this time, I was also socialized into the culture, mores, and values of my profession and the organization for which I worked. This focus on learning as acquiring meaning codified in "objective" bodies of knowledge has largely been the preoccupation of theorists and researchers concerned with understanding and improving work-based learning. Even many studies of socialization-related learning assume that some important form of meaning is being transmitted to and received by the learner through the context of the organization's culture. In this view of work-based learning, the self is understood in relatively passive terms, a willing recipient of structures of objectified meanings which, when acquired, contribute to the development of the sense of self as a more skilled or knowledgeable worker. Much of my formal learning as an undergraduate seemed to be guided by this notion of meaning. Knowledge is seen as objective, apart from the learner, and instrumental in nature - directly applicable to the demands of the work context. Learning is considered a rational process and reason mediates between the subjective experience of the student and an empirically demonstrable reality of the workplace.

From a strictly technical-rational point of view, processes of self-knowing appear to have little to do with work-based learning. If we are concerned with the problem of meaning in learning, however, this perspective proves to be quite inadequate for developing a deeper understanding of what it means to learn and what it is that is actually learned. By its very nature, this form of knowing does not address questions of quality, meaning, or values (Sloan, 1983). When formal learning is framed in this manner, it often results in fragmented knowledge about our selves and the world and is ultimately alienating rather than humanizing. Incorporation of "active learning" and other humanistic or "student-centered" strategies often does little to alter fundamentally technical-rational conceptions of knowledge. These strategies seem designed to evoke learner enthusiasm and interest in acquiring the codified bodies of meaning, rather than to ground learning concretely and meaningfully within one's experience. They do little to help learners understand the deeper meaning of what it is they are trying to learn - the purpose or sense of direction, values, and qualities that are evoked within them by the study of the content.

Two broad trends in research and theory, however, suggest a fundamentally different orientation to the problem of meaning in workplace learning. They provide a kind of invitation to consider the significance of self-knowing to one's development as a worker. The first of these is a growing recognition and acceptance of the intrinsic centrality of work within our lives. Work is one of the most important life phenomena that manifests itself during the adult years, a central psychological and social force we experience as individuals and as a society (Merriam & Clark, 1991; Smelser, 1980). Various strands of literature seem to underscore this observation, such as recent popular works by Sinetar (1987), Autry (1994), and Richards (1995) on the meaning of work in our lives; the spirituality of work literature that has emerged within the last 15 years (Bolman & Deal, 1995; Chappell, 1993; Fox, 1994; Hawley, 1993; Whyte, 1994); philosophical (Arendt, 1958), psychosocial (Smelser & Erikson, 1980) and sociological inquires (Schor, 1992); and studies of organizational behavior (Pauchant & Associates, 1995) and transformation (Adams, 1984; Fletcher, 1990). Taken as a whole, this body of literature beckons us to consider the meaning of work in our lives and what it means to learn to work. It suggests that the world of work is woven inextricably into our lives and our lives shape and influence what meanings we hold for work. Rather than work being something which can be understood apart from our contexts and who we are persons, its meaning seems bound up, in a deep, perhaps even spiritual way, with our sense of self.

For example, in the course of my learning to become a clinical microbiologist, I developed an intense fascination with host-parasite relationships, an interest which quickly grew more broadly into philosophical considerations that lead me out into the world of ecology, psychology, sociology, and, ultimately teaching and learning. This aspect of my training became a basis for not only future career moves but a deeper understanding of my self in relation to the world. It further fueled my interest in learning about the work that I did. Technically, I needed to know none of this to isolate and identify disease-causing organisms from human tissue and body fluids. The idea, however, of host-parasite relationships, which was manifest in each culture that I performed, held far more meaning for me as a health worker. In this case, the intersection of the self and the work resulted in both an enhancement of self knowledge and of the work that this self was asked to perform.

A growing body of literature has been focusing on understanding work as a natural expression of our humanness (Arendt, 1958; Csikszentmihalyi, 1990; Deems, 1997; Fox, 1994; Hillman, 1983; Pauchant & Associates, 1995; Welton, 1991). In this tradition, work is seen as a manifestation of innate propensities we have for realization or actualization of our sense of who we are as persons and communities, a primary site of adult learning and development. Thus, work itself is critical to understanding how we come to know and understand ourselves as individual workers and as members of an organization. Through the psychological, social, and cultural intersections that work weaves throughout our lives, it represents a profound site for constructing our sense of self.

The second area of research and theory which invites a different understanding of meaning in work-based learning is the emergence of constructivist notions of learning (Steffe & Gale, 1995). Constructivism challenges our long-held assumptions about what it is we come to know and how we come to know it (Brooks & Brooks, (1993). Rather than meaning residing outside of the learner's experience, such as in the requirements of a given job or the expectations of a particular organization, constructivism suggests that meaning is created within the interaction of the learner with the context of one's work. In a sense, the learner constructs what it is he or she needs to know to do the work within a particular context. This view does not deny the existence of factual information or the presence of particular procedures or ways of doing things. It does, however, place emphasis on the worker-learner for naming and conferring meaning on these bodies of information or sets of actions. I may be able to set up a bacterial culture using prescribed sets of techniques taught to me by others. But the meaning, value, and purpose of these techniques are derived from *my* constructions, what meaning *I* confer upon them. Thus, my experiences and contexts are central to the process of making sense or meaning of what it is that I am learning to do. Constructivist approaches to knowing and learning in work stress the importance of context, the role of learner experience in what and how one comes to know, and the learner's construction of knowledge (Brooks & Brooks, 1993). This perspective represents a sharp departure from traditional, technical-rational approaches to learning. When we learn to work, we learn more than the knowledge and skills required of our jobs or even the values, attitudes, and norms reflected in our occupations and the organizations for which we work. We come to understand the ways in which our sense of who we are comes to be expressed through the work that we do. What it means to learn to work and the meaning of what we learn to do involves far more than simply acquiring a prescribed body of knowledge and an ability too use that knowledge within specific contexts.

Recent studies of the workplace suggest that the ways in which our sense of self is constructed and re-constructed over time significantly influence all aspects of work and its structure and organization. When persons and groups participate in work-based learning, they engage in a process of re-constructing the individual and collective self. Thus, notions of the self and how we come to know about the self are critical to our understandings of what it means to learn within the context of one's work. Transformational theory, (Clark, 1993; Cranton, 1994, 1997; Dirkx, in press; Mezirow, 1991, 1995; Taylor, 1997) directs our gaze to the complex, dialogical, and transactional relationship between work and the self, and provides a framework for deepening our understanding of work-based learning.

Transformation theory suggests that certain forms of learning have a profound influence on our views of ourselves and our relationships with the world. With few exceptions, however, meaning-making is conceptualized within transformation theory in largely rational terms and the process of coming to the know the self is viewed through socio-cognitive frameworks. These interpretations of the self convey a sense of an heroic journey undertaken by a rational ego in pursuit of consciousness and enlightenment, an image of learning particularly evident in education for work and workplace learning. Relatively little attention is given to the emotional, spiritual, and extrarational issues which arise when learners and their experiences are fully engaged with each other and the work context in interpersonal and collaborative methods (Dirkx & Laswell, 1994). Non-egoic or extra-rational psychological processes within transformative work-based learning are often minimized or even ignored all together. Others interested in redressing what they consider to be major limitations of Mezirow's rational view of transformative learning recognize the significance of these issues in making learning meaningful and transformative (Taylor, 1997). The emotional, spiritual, and non-egoic dimensions of transformative learning are further supported by the burgeoning spirituality of work literature. Yet, these preliminary views do not provided a theoretically well developed understanding of the extra-rational, non-egoic processes of self-knowing. Without such development, we are in danger of re-defining transformative learning as largely an emotional experience, with relatively little rational, conscious participation on the part of the individual. Neither perspective seems satisfactory for a deep understanding of transformative learning.

The core of the problem, then, in understanding meaning-making and self-knowing in work-based learning is an unquestioned belief that meaning and self-knowledge are derived from a rational consideration of the context of work in light of one's experiences, that meaning and knowledge are ultimately derived from rationality. While helpful in some respects, this view of work-based learning virtually ignores the role that imagination and fantasy play in coming to know our selves as workers within particular organizational contexts. In the remainder of this paper, I sketch an alternative conception for re-visioning how we construct meaning and self-knowledge through work-based learning. This perspective relies on a philosophy of imagination and archetypal psychology, in which meaning and truth are revealed through imagination and fantasy - a poetics of mind - and not merely rational ways of knowing. Building on prior work in adult learning with this tradition (Boyd, 1991; Boyd & Myers, 1988; Briskin, 1996; Dirkx, 1997, 1995; Dirkx & Deems, 1996; Nelson, 1997; Scott, 1997), I argue for a view of transformative, work-based learning that is mediated by images and reflects a journey of the soul.

Re-visioning the Meaning of Work-based Learning: Psyche's Invitation

The fundamental premise being developed here is that work-based learning provides a rich context for fostering a kind of self-knowing that enriches both the worker and the workplace. Furthermore, these processes are potentially transformative and fostered through imaginal approaches to the context of work. When work is viewed as intrinsic to who we are as persons, notions of the self and how we come to know about the self are critical to our understandings of what it means to learn within the context of one's work. The perspective I am trying to develop seeks a deeper understanding of the emotional and spiritual dimensions that are often associated with profoundly meaningful experiences in work. By approaching these experiences imaginatively rather than merely conceptually, learners locate and construct, through enduring mythological motifs, themes, and images, deep meaning, value, and quality in the relationship between the context of work and their own life experiences.

A philosophy of imagination challenges exclusive reliance on rational and conceptual modes of knowing and learning and the technicism and literalism they foster. A philosophy of imagination "places the image over the concept, the speech over the argument, and the mythic divination over the fact" (Verene, 1981, p. 30). When speaking about imagination, image, the imaginal, and fantasy, I use these terms not in the sense of imaginary, fictive, or otherwise unreal, but as "the central importance of imagination and insight in all our thinking and knowing....our means of interpreting the world...also our means of forming images in the mind" (p. 140). Images are *the way* in which we perceive, see, and come to know ourselves and the world. They play a critical role in making sense of our experiences by allowing us to find value and meaning in them (Hillman, 1989, pp. 21-22). Fundamentally, understanding flows from images and not rational categories. As Moore (1992) suggests, "We have a longing for community and relatedness and for a cosmic vision, but we go after them with literal hardware instead of sensitivity of the heart" (p. 208). "Thinking" our way through this mind-body split is, according to Moore, part of the problem and not a resolution. He suggests a another possibility, one in which imagination connects us, through its images, in a deep and profound way with the depth of our being. This is the path of soul or mytho-poetic consciousness.

A fundamental premise of the present view of work-based learning is that work represents a potential context for connection with and nurturing of soul, of deep imaginative approaches to understanding ourselves and our relationship with the world. As Auger and Arneberg (1992) suggest, "The changes that have been occurring in the workplace and workforce have given the meaning to the word *work* that Jung attributed to it more than forty years ago - that it is Psyche's invitation to personal transformation and individuation." Within this perspective, the *psyche* or soul is central to understanding who we are as persons and as a society. Soul manifests itself in consciousness as a search for meaning in life. Moore (1992) suggests that "Tradition teaches us that the soul lies midway between understanding and unconsciousness, and that its instrument is neither the mind nor the body, but imagination" (p. xi). It is not a thing but a quality of experience - of life and of ourselves. Soul has to do with heart, depth, relatedness, depth, and personal substance. Hillman (1975) suggests that

> the word refers to that unknown component which makes meaning possible, turns events into experiences....soul refers to the *deepening* of experiences. ..the imaginative possibility in our natures, the experiencing through reflective speculation, dream, image, and fantasy - that mode which recognizes all realities as primarily symbolic or metaphorical. (p. x)

The mytho-poetic perspective, represented in the work of Jungian, neo-Jungian, and other depth psychology scholars, such as James Hillman, Robert Sardello, Thomas Moore, Giesela Labouvie-Vief, and Marion Woodman, places primary importance on recognizing and understanding the images which populate and animate consciousness. These images represent gateways to the unconscious. The self is understood and experienced as inner entities which seem to have a life of their own, such as "intentions, behaviors, voices, feelings, that I do not control with my will or cannot connect with my reason" Hillman, 1975, p. 2). There is an aspect of my self that is ambitious, wants to achieve, be famous and respected by my peers. This is the keynote speaker, the well-known author who monitors his book sales almost daily. There is another aspect of myself which is troubled with this person, finds him ego-centric, self-centered, and not terribly sensitive. This is the monk, the one who wants to go about his work quietly and thoughtfully, living simply and close to the earth. These are examples of the "selves" that call my psyche home. There are others as well, all manifesting themselves in various images and shapes within my conscious awareness at various times in various contexts.

These age-less, universal voices take form and substance through images, which manifest deep and profound feelings and emotions about who we are and how we feel about our life experiences. In his approach to understanding emotions within his own life, Jung described the close relationship between image and emotion: "I learned how helpful it can be...to find the particular images which lies behind emotions" (Chodorow, 1997, p. 26). In rev-visioning a way of knowing through imagination, Hillman (1975) stresses the need to grasp the archetypal significance that is carried in the depth of our words. Images are ways through which individuals and collectives potentially come to express and connect with this deeper reality. Images are "angels" or message-bearers of the soul and, consequently, represent the depth of our experiences. Soul is not merely manifest in one's inner images but also in shared ideas within the world as well (Hillman, 1975; Sardello, 1992). They are reflected in big words or concepts, such as Truth, Power, Justice, and Love. These are ideas that animate not just individuals but groups of people and even whole populations. When we speak of soul within an organization, it is likely that we are participating in or at least observing the manifestation of one or more of these big ideas. The power of these ideas rests not with their intellectual heritage alone but with their capacity to activate the imagination, to invite persons to engage in imaginative ways with themselves and their work context. They connect us both with deep aspects of our inner life and with enduring qualities of life as a member of a community.

Charged images often represent complexes, in which we encounter psychic energy that is clustered around certain concerns or issues that usually reflect various aspects of our relationships with others. Common examples include the authority, mother, father, and ego complexes. When they present themselves, they carry with them an imperative quality - we are compelled, drawn into, and taken over by them. It is as if, for that moment, consciousness emanates from another place within us, other than one's ego. Bursts of insight, intuition, and the "eureka" experience, as well as strong moments of anger and sadness illustrate how these images serve as conduits or messengers for deeper entities within the human and collective psyche. Working with images draws us down into ourselves but, paradoxically, also out into the world. This idea of soul as bridging inner experiences with aspects of our outer worlds is a key idea to understanding how this imaginal world is manifest within our learning experiences and how it mediates transformation within work-based learning.

Working with the Image in Work-based Learning

So what does all of this then have to do with fostering self-knowledge within work-based learning? How do multiple selves, big ideas, and soul relate to education-for-work programs, for continuing education or training within work, or informal learning on the job? The notion of soul in work-based leaning is predicated on the assumption that, in and through work, we connect with and express in a fundamental way who we are as persons and organizations. Work puts us in touch with the archetypal nature of our being. It is in working -

what we do and the relationships we establish with others in our work - that we give voice to this deeper essence of who we are. By becoming aware of these forces, by participating with them in a more conscious manner, we are less likely to be unwillingly buffeted around by their presence in our lives. When we enter in a conscious dialogue with them, we create the opportunity for deeper meaning and more satisfying relationships with our work. The basis for this active engagement and dialogue is imagination. In working with the imagination, it is important to differentiate images as constructions of our conscious, cognitive egos, and images which arrive as angels or message-bearers from the psyche. It is the latter which is the focus of learning through soul. From the mytho-poetic perspective, images and fantasies which flow from the work of the imagination are not under the willful control of the ego. They are not cognitive constructions which we work to create. Rather, they arrive as they so choose, as acts of grace, relatively independent of the needs and desires of the ego. For me, the idea of host-parasite relationships represented such an image, a presence of grace within my worklife. I did not consciously select this idea from a number of "interesting" possibilities. It drew me to it, through books, articles, and experiments. Like Marley's ghosts in *A Christmas Carol*, this image beckons me to vistas and realms of meaning not open to my ordinary, waking, ego-based consciousness. It was no accident that these ghosts appeared to Scrooge during sleep, in the middle of the night. But they transformed his sense of self and his relationship to the world.

Imagination and the imaginal method are critical in recognizing, naming, and understanding the meaning of images concealed within our deep, often emotional experiences of work (Hillman, 1975), but we do not create the images or their meanings through these methods. Our soul work - our learning - is to recognize, elaborate, and differentiate them as a means of developing a deeper understanding of our experience in the context of work. Strong emotions and deep feelings arising within some aspect of work suggest engagement with soul. In work-based learning, these emotions and images may arise in association with the "text" or the content or skill being learned, or within relationships with others within one's workplace or learning setting. In my own clinical training, we might think of the host-parasite relationship as one of these images. In addition to being a clinical concept, this idea represents an emotionally powerful motif, one which raised many questions for me with regard to my relationship to the broader psychosocial and cultural world in which I lived. To use another example, learning something new or what I perceive to be complicated, like a new computer application, sometimes engenders within me fears and anxieties, alongside a sense of hopeless dependency. These can be uncomfortable and disquieting emotions and my first reaction is to do what I can to reduce their presence within my learning experience, or to structure my learning to insure that they don't present themselves. Typically, these fears and anxieties take shape in the form of an image, like a failed promotion, a humiliating performance, or stinging criticism from my students and peers. By staying with them, recognizing and naming them, not wishing them away like some kind of disease or pathology, I provide an opportunity to hear the voice of soul.

The purpose of the imaginal method or soulwork is not to analyze and dissect these emotions and feelings but to imaginatively elaborate their meaning in one's life. In contrast to Mezirow's (1991; Cranton, 1994) notion of transformative learning, in which we are encouraged to ask "how" or "why" questions about these feelings and emotions, we might simply ask "what:" What do these emotions feel like, remind me of? What other times I have felt this way, experienced these emotions? What was going on then? Who was all involved in that incident? As we elaborate these feelings and emotions, they may begin to take on the form of images. Sometimes, behind my fears and anxieties about demonstrating my competence rests an image of a young boy desperately seeking acceptance from his father and older brothers. Naming this image then allows me to ask, "Who is this boy and what would he have me do in this situation? What is he trying to tell me?" Other emotions, such as fear of confrontation and conflict, anger with authority figures, or a longing for community with my co-workers provide a similar basis for inner work. At times, it may be an aspect or idea within the work itself which becomes numinous. It draws us into it. We become fascinated, intrigued, caught up with this part of our work. As with all emotions and feelings within relationships, these images, too, can have its down-side. We can become too wrapped up in them, over-identify with them, become overwhelmed by their numinosity. We lose track of who we are, where we are, and we don't get the work done. As we recognize, name, and work with the images which animate these aspects of our worklife, we move toward a deeper, more conscious connection with these aspects of our selves. We befriend that person or persons within our psyche. Here we are talking about the transformation of ordinary existence into the "stuff of soul" (Moore, 1992, p 205), where there is a meaningful connection through imagination between our work and our life experiences. These images provide access to the psyche, an invitation to the journey of the soul., of coming to know myself as a person. As they take shape within my consciousness, they provide an opportunity to deepen my understanding of their meaning in my work life. As Moore (1989) suggests, we glimpse the soul through image.

Conclusion

Thus, work-based learning provides a context in which we are invited to participate in a journey of soul. The overall aim of transformative learning within this context, is not necessarily to develop or to grow towards wholeness, in a humanistic sense. These are objectives of a more spirited, herioic consciousness. Rather, the aim of transformative learning, as I am developing it here, is to deepen our self-understanding by recognizing and elaborating the different and sometimes contradictory essences that have set up housekeeping within our psyches and to learn to live with the tension that is created by recognizing and accepting their presence in our lives. This sort of learning encourages us to embrace the contradictory and paradoxical nature of our lives within work. In a sense, we might think of work as activating archetypal forces within the individual or the group, which then become manifest in particular images or fantasies. Images will lead us into deeper, more profound relationships with some of these archetypal figures, such as Power, Authority, Mother, Child, and Hero. Along with Compassion, we might recognize Contempt; Trust with Suspicion and Mistrust; Courage with Cowardliness. Instead of seeing these as characteristics of our work and the workplace, we might understand them as little people that populate the psyches of our ourselves and the organizations within which we work, autonomous entities with a life of their own independent of our will or desire to control or harness them for some worthy project of the ego. Work as text, then, through the particular meanings and symbols embodied within it, may evoke within individuals or the group images and fantasies which suggest ways in which the learning experience is or can be linked in a more profound way with the deep experiences represented in the group.

A mytho-poetic approach to transformative, work-based learning provides a holistic perspective for understanding how worker-learners come to develop deep knowledge of themselves. Understanding imagination as the source of all psychic life, including reason and rationality, has profound implications for how we think about, design, and implement all forms of work-based learning. Scholars within various settings for adult learning are suggesting how imagination and the mytho-poetic perspective are or can be reflected in our teaching and learning (Briskin, 1996; Dirkx, 1997; Fox, 1994; Whyte, 1994). Common to these various approaches are a reliance on "seeing" through the "eyes" of the imagination, of the heart, as opposed to the mind or the head, the merely rational. They suggests that such learning should also be an education of the heart, a journey of the soul, and imagination as a way in which the truth of the journey reveals itself in our lives at and in work.

References

Adams, J. D. (Ed.) (1984). *Transforming work*. Alexandria, VA: Miles River Press.

Arendt, H. (1958). *The human condition*. Chicago: University of Chicago Press.

Auger, R., & Arneberg, P. (1992). Analytical psychology, and organizational development at work. In M. Stein & J. Hollwitz (Eds.). *Psyche at work: Workplace applications of Jungian analytical psychology*. Wilmette: Chiron.

Autry, J. A. (1994). *Life and work*. New York: William Morrow and Co.

Bolman, L., & Deal, T. (1995). *Leading with soul*. San Francisco: Jossey-Bass.

Boyd, R. D. (1991). *Personal transformation in small groups: a Jungian perspective*. London: Routledge.

Boyd, R. D. & Myers, G. J. (1988). Transformative Education. *International Journal of Lifelong Education*, 1988, *7* (4), 261-284.

Briskin, A. (1996). *The stirring of soul in the workplace*. San Francisco: Jossey-Bass.

Brooks, J. G., & Brooks. M. G. (1993). *In search of understanding: The case for the constructivist classroom*. Alexandria. VA: Association for Supervision and Curriculum Development.

Chappell, T. (1993). *The soul of a business: Managing for profit and the common good*. New York: Bantam.

Chodorow, J. (Ed.). (1997). *Jung on active imagination*. Princeton: Princeton University Press.

Clark, M. C. (1993). Transformational theory, In S. Merriam (Ed.), *An update on adult learning theory*. San Francisco; Jossey-Bass.

Cranton, P. (Ed.). (1997). *Transformative learning in action: Insights from practice*. San Francisco: Jossey-Bass.

Cranton, P. (1994). *Understanding and promoting transformative learning: A guide for educators of adults*. San Francisco: Jossey-Bass.

Csikszentmihalyi, M. (1990). *Flow*. New York: HarperPerennial.

Deems, T. A. (1997). *Vital work: Meaning and experience within the natural workplace*. Unpublished doctoral dissertation, Lincoln, NE: University of Nebraska.

Dirkx, J. M. (In press). Transformative learning theory in the practice of adult education: An overview. *PAACE Journal of Lifelong Education*.

Dirkx, J. M. (1997). Nurturing soul in adult learning. In P. Cranton, (Ed.). *Transformative learning in action*. San Francisco: Jossey-Bass.

Dirkx, J. M. (1995). Educating for vocational integration: The role of spirit and soul in education-for-work. In R. Orem & C. Mealman, (Eds.). *Proceedings of the Fourteenth Annual Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education*, Wheaton, IL: Northern Illinois University and National-Louis University, pp. 62-67.

Dirkx, J. M., & Deems, T. A. (1996). Towards an ecology of soul in work: Implications for Human Resource Development. In E. F. Holton III (Ed.), *Academy of Human Resource Development 1996 Conference Proceedings*. Austin, TX: Academy of Human Resource Development.

Dirkx, J. M., & Laswell, T. D. (1994). The influence of self-other relationships in constructivist approaches to adult learning. In L. Martin (Ed.), *Proceedings of the Thirteenth Annual Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education*, Milwaukee, WI: University of Wisconsin (pp. 48-53).

Fletcher, B. R. (1990). *Organization transformation theorists and practitioners*. New York: Praeger.

Fox, M. (1994). *The reinvention of work: A new vision of livelihood for out time*. New York: Harper San Francisco.

Jarvis, P. (1992). *Paradoxes of adult learning: Individual and society*. San Francisco: Jossey-Bass.

Hillman, J. (1975). *Re-visioning psychology*. New York: Harper & Row.

Hillman, I. (1983). *Inter Views*. New York: Harper Colophon.

Hillman, J. (1989). The poetic basis of mind. In T. Moore (ed.), *A blue fire: Selected writings by James Hillman*, New York: Harper & Row, 1989 (pp. 15-35).

Mahoney, M. J. (1991). *Human change processes: The scientific foundations of psychotherapy*. New York: Basic Books.

Merriam, S. B., & Clark, M. C. (1991). *Lifelines: Patterns of work, love and learning in adulthood*. San Francisco: Jossey-Bass.

Mezirow, J. (1995). Transformation theory of adult learning, In M. R. Welton (Ed.). *In defense of the lifeworld: Critical perspectives on adult learning*. Albany: SUNY.

Mezirow, J. (1991). *Transformative dimensions of adult learning*. San Francisco: Jossey-Bass.

Moore, T. *(1992). Care of the soul: A guide for cultivating depth and sacredness in everyday life*. New York: HarperCollins.

Moore, T. (Ed.). (1989). *A blue fire: Selected writings of James Hillman*. New York: HarperPerennial.

Nelson, A. (1997). Imaging and critical reflection in autobiography: An odd couple in adult transformative learning. In R. E. Nolan & H. Chelesvig (Eds.). *38th Annual Adult Education Research Conference Proceedings*, Stillwater, OK: Oklahoma State University.

Pauchant T. C. & Associates (1995). *In search of meaning: Managing for the health of our organizations, our communities, and the natural world*. San Francisco: Jossey-Bass.

Richards (1995). *Artful work: Awakening joy, meaning, and commitment in the workplace*. San Francisco: Barret-Koehler.

Sardello, R. *(1992). Facing the world with soul: The reimagination of modern life*. New York: HarperPerennial.

Schor, J B. (1992). *The overworked American: The unexpected decline of leisure*. New York: Basic Books.

Scott. S. M. (1997). The grieving soul in the transformative process. In P. Cranton, (Ed.) *Transformative learning in action*. San Francisco: Jossey-Bass.

Sinetar, M. (1987). *Do what you love, the money will follow: Discovering your right livelihood*. New York: Paulist Press.

Sloan, D. (1983). *Insight-imagination: The emancipation of thought and the modern world*. Westport, CN: Greenwood Press.

Smelser, N. J. (1980). Issues in the study of work and love in adulthood. In N. J. Smelser & E. H. Erikson (Eds.). *Themes of love and work in adulthood*. Cambridge: Harvard University Press (pp. 1-26).

Smelser, N. J., & Erikson, E. H. (1980). *Themes of love and work in adulthood*. Cambridge: Harvard University Press.

Steffe, L. P., & Gale, J. Eds.).(1995). *Consrtructivism in* education. Hillsdale, NJ: Lawrence Erlbaum.

Taylor, E. (1997). Building upon the theoretical debate: A critical review of the empirical studies of Mezirow's transformative learning theory. *Adult Education Quarterly, 48*(1), 34-59.

Verene, D. P. (1981). *Vico's science of imagination*. Ithaca, NY: Cornell University Press.

Welton, M. (1991). *Toward development work: The workplace as a learning environment*. Deaken University Press.

Whyte, D. (1994). *The heart aroused: Poetry and the preservation of soul in corporate America*. New York: Doubleday.

Perceptions of Learning Systems in Organizations

Dimensions of the Content and Organization of Learning Systems and Differences between Managers and Workers in nine Departments of a non-profit Organization.

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Learning systems can be described in terms of perceptions of managers and workers in the organization. Using a questionnaire to make this description, we compared both perceptions to find out which dimensions underlie these perceptions and what the differences are between managers and workers. The results indicate that compared with managers, workers think of the work orientation of learning programs as less important, have less preference for formal learning orientation and perceive less management-influence of the learning system. Hardly any differences were found between the departments of the organization.

One way to improve the learning system in an organization is to use organization development methods (French & Bell, 1995). These methods centre on the following procedure: first a description of the existing situation is made. This description is then discussed with the members of the organization and action plans to improve the existing situation are formulated. Finally these action plans are carried out in the organization.

The perception of the existing situation plays a crucial role in such procedures. The difficulty in working with perceptions, though, is the fact that there is no such thing as an objective reality. People perceive reality in their own unique way and make up their own unique description of this reality. The same goes for the existing situation in a learning system: in describing this situation, people use their own perceptions. So in trying to obtain a complete picture of a learning system by interrogating different actors one is bound to find different perceptions, though similarities can also be found.

A way to obtain a picture of the existing situation is to question different actors who are involved. In the case of the learning system of workers in an organization, that would be workers and managers, because they are involved in the making of this learning system. Based on their different posistions, they have different points of view.

This study traces the dimensions which underlie the perceptions that managers and workers have of the learning system of the workers. For each of these dimensions we have attempted to identify the differences and similarities between the perceptions of managers and workers.

It has been said (Senge, 1990) that the more actors are interacting and communicating, the more their perceptions will conform. Furthermore, one would expect the communication and interaction between actors in the same department to be more intens than that between actors in different departments. This would suggest that actors within a department would have more corresponding perceptions than actors in different departments of organizations. This would also apply to perceptions of the learning system of an organization. So finding out about differences and similarities in the perceptions of actors between organizations would give starting points for improving the learning system of these organizations.

In this study we compared actor perceptions of the learning system of workers in different organizations.

A learning system can be described as "a composite of actors (individuals and groups) functioning either within or outside an organization who undertake actions relevant to the learning of the members of that organization." (Van der Krogt, 1995).

Learning systems are dynamic systems developing and improving over time (Marsick & Watkins, 1990; Van Moorsel, 1997; Van der Krogt, 1995). A description of the learning system is the starting point for the formulation of action plans to develop and improve the existing learning system.

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Three main elements are distinguished in the learning system: the structure, the processes and the actors. The actors are internal and external trainers, but also managers and workers. The actors undertake activities in two processes: the development and the execution of learning programs. The content structure of the learning system relates to the content and form of the learning programs.The organizational structure of the learning system is related to the positions and the authority of the actors and the communication and consultation structure.

Research Questions

In our research we developed a measuring instrument to obtain information about the existing learning system of workers in an organization as perceived by managers and workers. The analysis of the results was aimed at the following research questions:

1. Which dimensions exist in the perceptions of the learning system held by managers and workers?
2. To which degree are managers different from workers on these dimensions?
3. To which degree do managers and workers in the nine departments hold different perceptions?

Method

Participants. The participants in this study were managers and workers in nine Dutch crisis centres for problematic youngsters. These centres, spread across different areas of the country, are part of one organization and therefore share the same organizational features.
Of the 731 questionnaires that were handed out at the nine centres, 358 were returned (49%). The response per centre ranged from 28% to 91%.

Procedure. Prior to this research a questionnaire was developed to measure perceptions of various aspects of the learning system. A trial version of the questionnaire was filled out by 50 training managers and as a consequence several items were rephrased. Two types of questionnaires were delivered to these nine centres, one for the managers and one for the workers. The respondents were asked to return the questionnaire within a week.

Measures. The purpose of the questionnaire was to measure respondents' perceptions of the actual learning system. Workers were asked about their perception of their learning system; managers were asked about their perceptions of the learning systems of their workers. The 107 items in the questionnaire referred to the following aspects of learning systems (Van der Krogt et al., 1993):

- development and implementation of learning programs in the learning system: the creation or improvement of the learning potential of learning situations in programs.
- contents of the learning system: the learning situations and the learning programs in an organization.
- organizational structure of the learning system: the positions of different actors and their relationships (e.g. HRD-managers, learners or external actors).

The participants were asked to answer the items with help of seven-point Likert scales varying from "not at all applicable" to "completely applicable".

Results

Five Dimensions in the Perceptions of Managers and Workers on the Learning System

With help of iterative factor analyses and oblique rotations, five dimensions emerged from the item pool of 107 statements. Cronbach's alpha coëfficients computed on the sample ranged from .73 to .91.

a. *Work oriented learning* (alpha = .91; 9 items). The degree to which programs are focused on the work and the problems related to it. An example of an item referring to this dimension is: "The content of educational and learning activities for workers serves to enhance professional knowledge".
The next two dimensions refer to the styles of learning in the learning programs:

b. *External learning orientation orientation* (alpha = .73; 4 items). The degree to which formal learning (off-the-job learning) is seen as important. An example of an item referring to this dimension is: "Workers acquire their expertise mostly by attending courses to improve their skills".

c. *Internal learning orientation* (alpha = .77; 5 items). The degree to which informal learning (learning on-the-job) is seen as important. An example of an item referring to this dimension is: "Workers acquire their expertise mostly by sharing knowledge and experiences with other members of the organization".

The next two dimensions refer to internal and external actors in the learning system:

d. *Management orientation* (alpha = .86; 10 items). The degree to which managers influence the learning system. An example of a statement referring to this dimension is: "In organizing the improvement of expertise, management plays a key role".

e. *External orientation* (alpha = .76; 7 items). The degree to which external actors develop and implement learning programs for the organization. An example of an item referring to this dimension is: "Our department provides documentation on learning activities organized by educational agencies or vocational education, is used".

Differences in Perceptions of Managers and Workers. A t-test for independent groups was carried out to determine whether differences exist between managers and workers. The results are shown in Table 1.

Table 1.
Differences between managers (M) and workers (W) on five learning system dimensions.

Dimension	Mean (M)	SD (M)	Mean (W)	SD (W)	t-value	df	p
Work Oriented Learning	5.10	.68	4.55	1.36	4.36	119	.000
External learning orientation	4.11	.98	3.30	1.48	4.96	88	.000
Internal learning orientation	5.10	1.02	4.82	1.18	1.29	357	.196
Management orientation	4.92	1.23	3.75	1.10	6.81	352	.000
External orientation	3.16	1.10	2.99	1.19	.96	350	.336

Differences between managers and workers are significant on the following dimensions: Work Oriented Learning (p = .000), External learning orientation (p = .000) and Management orientation (p = .000). These differences can be interpreted as follows: compared with workers, managers attach more importance to the content of learning programs (the learning programs are directed to work and work related problems), percieve the learning system as being externally oriented (more formal learning) and management-oriented (influenced by managers). No significant differences are found on the dimensions: Internal learning orientation (p = .196) and External orientation (p = .336).

Differences between the Nine Departments. ANOVAs with post hoc t-tests were used to investigate differences between the nine departments. Separate analyses were carried out for managers, workers and the total group of managers and workers. However, testing differences between departments for the subgroup of managers is a tricky problem.

The number of managers in each department is very low (varying between one and five) and the basic assumption of analysis of variance, that the nine departments should have equal variances, is violated. The latter is a consequence of the low number of managers in each department (with one or two managers in one department the variance can be zero). It was decided to only test differences for workers and for the total group.

The variables *work oriented learning*, with F(8,311)=1.310, p=.238 for the total group, and F(8,247)=1.170, p=.318 for the workers, and *internal learning orientation*, with F(8,322)=1.787, p=.079 for the total group and F(8,257)=1.624, p=.118 for the workers, didn't show any differences between the nine departments..

The variables *external learning orientation* (with F(8,321)=9.801, p=.000 and F(8,256)=3.807, p=.000 respectively), *management orientation* (with F(8,316)=3.240, p=.002 and F(8,252)=1.712,

p=.0961 respectively) and *external learning orientation* (with F(8,315)=5.28, p=.000 and F(8,250)=4.646, p=.000) show differences between the nine departments for the total group as well as for the workers with the exception of the management orientation of workers.
An inspection of the differences between the departments with post hoc t-tests revealed that one department was largely responsible for the significant ANOVA results.

Discussion

In this study we found five dimensions underlying the perceptions of managers and workers of the learning system of the workers. These dimensions refer to one main element of a learning system: structures. The work orientation of the learning program, the external and internal learning orientation all refer to the content structure of a learning system. Management orientation and external orientation refer to the organizational structure of a learning system. The other two elements were not found in the dimensions.

HRD officers view learning systems in a different frame of reference than organization members, e.g. managers and workers. The development of the instrument in this study was based on our interpretation of what a learning system is, not on the interpretation of the organization members. The fact that the other two main elements, processes and actors, were not found to play a role in the dimensions we found in this study might conceivably be due to this difference in frame of reference.

We have tried to interpret the differences in perceptions of managers and workers of the learning system of the workers in the organization. But the interpretation of the results is also based on our own perception of what a learning system is. Perhaps our interpretation of differences in perceptions between managers and workers is influenced by our own perception?

The results of the present study suggest that managers and workers within an organization have different perceptions of the learning system of the workers on the following dimensions: the work orientation of the learning program, external learning orientation and management orientation.

With the help of this information we are able to give a description of a limited part of the learning system, namely the structure. This description offers starting points for further development and improvement of this structure. However, on the internal learning orientation and management orientation dimensions no differences were found between the different actors. It appears that both managers and workers perceive informal learning as important (5.10 and 4.82). Based on this, we conclude that in improving the content structure of the learning system it could be useful to consider forms of informal learning, e.g. learning on the job.

Further, managers and workers agree on the influence of managers on the learning system. They both perceived this influence to be high (4.92 and 3.75). It is problematic to interpret this result because no questions were asked about how managers and workers feel about this. Therefore we do not know whether they interpret this result as positive or as negative and this makes it hard to infer what this would imply for initiatives to improve the learning system. The last step in organization development methods is essential: finding out what action plans can be formulated to improve the existing situation regarding the dimension "management orientation".

Both managers and workers were included in this study. But there are other actors involved in the learning system of the workers, e.g. trainers. These actors have their own perceptions of the learning system of the workers. It might be useful to explore this in further research.

Contrary to our expectations, the results show that there are greater differences in perceptions of the learning system within departments than between departments. On the basis of this result, one could question the assumption that interaction and communication have the most important impact on perceptions. Apparently, differences in positions and interests also have an impact on perceptions. As long as these positions and interests are structural, differences in perceptions are also structural.

A critical note regarding this result can be made, though. The differences in positions and interests of managers and workers are left aside in the third research question, because they were pooled in the different departments of the organization. This might explain that there are fewer differences between departments than within departments. In this case differences in positions and interests are the decisive factor for differences in perceptions.

Much organization development literature (e.g. French & Bell, 1995) focuses on changing communication and perceptions. According to our results, this might not be the only way to develop organizations, because it will not change the existing differences in positions and interests. An additional option would be to try to create a situation in which these differences themselves are workable for the organizational members.

References

French, W.C. & Bell, C.H. (1995). *Organization development.* Englewood Cliffs: Prentice Hall.

Marsick, V.J. & Watkins, K.E. (1990). *Informal and incidental learning in the workplace.* London: Routledge.

Moorsel, A.A.H. van (1997). *Learning climate and the structure of work.* Paper presented at the 1997 HRD Annual Conference, Atlanta.

Krogt, F.J. van der (1995). *Leren in netwerken: veelzijdig organiseren van leernetwerken met het oog op humaniteit en arbeidsrelevantie* (Learning in networks: many-sided organising of learning networks with a view to humanity and work relevance). Utrecht, the Netherlands: Lemma.

Krogt, F.J. van der, Vermulst, A.A. & Terwoerds, I.E.C. (1993). Aanpak van kwalificatieproblemen in organisaties: een onderzoek naar strategieën van opleidingskundigen. (Tackling qualification problems in organizations: a study about strategies of training managers). *Tijdschrift voor onderwijsresearch 18 (5)*, pp. 295-305.

Senge, P.M. (1990). *The fifth discipline. The art and practice of the learning organization.*New York: Doubleday Currency.

Lifelong Learning and Performance:
The Role of Key Qualifications in Human Resource Development

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Employers are far from being able to predict what qualifications employees need to have in the future. Therefore there is an increasing consensus developing on the necessity for pupils to acquire key qualifications in initial vocational education. The assumption is that key qualifications enable employees to keep performing well during their career. Van Zolingen (1995) researched key qualifications and she concludes that key qualifications are also of interest to HRD practitioners because they are not only acquired in initial vocational education, but during a process of lifelong learning.

Through changes influencing work employees are confronted with changing qualification demands (Resnick & Wirt, 1996). Economic and commercial changes such as changing markets and stiff competition make organizations swing into action. In the first place a number of organizations implement automation and informating technology in production processes and offices (Child & Loveridge, 1990) and/or use new production techniques (Kern & Schumann, 1984; Appelbaum & Batt, 1994). These actions change the intrinsic character of work. On the one hand because humans have to do the work machines cannot do: the tasks that are not programmable, non routinised, where surprise and variability must be accomodated, where only adaptive human intelligence can make the evaluations and the decisions needed (Resnick & Wirt, 1996). On the other hand because (automated) work becomes the manipulation of symbols with a computer and asks more intellective skills of employees (Zuboff, 1988). Nowadays employees need to know how to find and use information to handle problems (Soden, 1994; Onstenk, 1997). They work more often in teams and for those that do not work in teams it becomes important to solve the complex problems they are confronted with, together with colleagues. Therefore 'soft skills' such as social skills and communicative skills but also interdisciplinary knowledge become indispensable for many employees (Appelbaum & Batt, 1994). And employees that used to have routine jobs nowadays need to be motivated and able to learn. In the second place organizations try to become more efficient by changing their organizational structure. For example by downsizing, by lean production or by business process reengineering (Womack & Jones, 1996; Champy & Hammer, 1993). The effect is that employees have to take more responsibility, more decisions, more initiative and work more indipendent. In the third place organizations pay more attention to personnel management such as career planning and training. Personnel is more often looked upon as human capital. From the perspective of human resource development lifelong learning has become a must for employees to continue to perform well in their occupation (Gilley, & Eggland, 1989; Rothwell, 1996). In the fourth place organizations pay more attention to the quality of products and of production processes and to the special demands of (more critical) customers (total quality management, customization) (Deming, 1986). This means that many employees need excellent social skills, motivation to change, broader understanding of the products they make and of the production processes they operate and knowledge of quality control, quality improvement, customers, customer relations, selling and allience with the quality vision of their organization.

As a result of these changes in the labour system, organizations prefer broadly trained employees that react flexibly and effectively to changes in their work, organization or career.

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These employees have to be capable to implement their knowledge in unpredicatable situations and with demanding customers. This means that employees nowadays need more developed and somethimes different qualifications to continue to perform well in their occupation. We name these key qualifications.

Problem Statement

Mertens introduced the concept key qualifications in a pioneering article in 1974. He suggested that, by devoting more time in vocational education and training curricula to key qualifications, and less time to the acquisition of specific knowledge, the problems in the transition from education to work could be reduced. Firstly, because key qualifications increase employability of employees (for example, when entering the labour market or changing jobs) and secondly, because key qualifications increase the adaptability of employees (they are better able to react to future developments that are not wholly predictable, for example, when there are changes within a job). In other words the performance of employees during their career would stay at an acceptable level with key qualifications. Mertens key qualifications would appear to have in common the fact that they become obsolete (unusable) less rapidly, because they are more abstract and can be used in different jobs, and in this case, have a transfer value. Examples of Mertens' key qualifications are: logical, analytical, structured, associative and contextual thinking; critical thinking using argumentation and discussion; being able to find, select and analyse information, basic knowledge of technology.

Since Mertens introduced the concept key qualifications, the concept has been formulated in various ways, under different names and often with overlapping meanings (see for example extra functional qualifications, broadly applicable occupational qualifications, hybrid skills, core skills, tranferable skills, transition skills, generic skills in Van Zolingen 1995). Yet the concept proved to be very elusive for curriculum developers and they were incapable of applying Mertens' key qualifications to curricula (Reetz, 1989). This problem of developing a theoretical concept of key qualifications that can be operationalized in curricula for vocational education and for training courses forms the subject of Van Zolingens' thesis that forms the point of departure of this paper.

Theoretical Framework

For the above mentioned reasons, Van Zolingen (1995) has provided a new coordinating interpretation of the concept key qualifications on the basis of an extensive literature search (see Figure 1). It is characterised by the following points:

1. Key qualifications have *an occupation-specific interpretation*. The social skills of a 'commercial employee' working in a bank, are defined differently from the social skills of a 'service mechanic'. This occupation-specific interpretation is related to the current demands of the work.
2. Key qualifications are broadly applicable within an occupation; that is to say, in various situations, thus also in situations that differ considerably from the situation(s) in which they were acquired.
3. Key qualifications make it possible to acquire specific knowledge and skills rapidly.
4. Key qualifications facilitate transitions within a career.
5. Key qualifications show an interrelationship, they form a whole. We can distinguish, purely theoretically, a general instrumental dimension, a cognitive dimension, a personality dimension, a socio-normative dimension, a strategic dimension and a socio-communicative dimension (see Figure 1).
6. Development or acquisition of key qualifications initially takes place within the context of the family. During and after vocational training at work, some key qualifications are further developed and others newly acquired in the context of an occupation and in interaction with personality development. In short, the acquisition and further development of key qualifications is a process of lifelong learning.

7. By creating the right educational conditions, for example, by applying particular didactic methods, some key qualifications can be acquired contextually and further developed during vocational education and training.
8. By taking into account employees' autonomy and learning potential when designing jobs, the acquisition of key qualifications can be stimulated during work.

Figure 1. Key Qualifications Redefined

Key qualifications are:

Knowledge, insight, skills and attitudes that are part of the durable core of an occupation or a group of related jobs, with the possibility of transfer to other, new jobs within that occupation and of innovations within that occupation, which contribute to the development of a person's occupational competence and facilitate transitions within the career.

general-instrumental dimension:
-occupationtal knowledge and skills which have a fundamental and/or lasting character and which can be applied in many situations (these include basic skills such as arithmetic, language and reading, general technical know-how, general knowledge of languages, general knowledge of computing, the ability to handle information*, the ability to plan work*, quality awareness*, commercial insight*)
-inter-disciplinary knowledge*

cognitive dimension:
-thinking and acting (identifying and solving problems*, abstract thinking*, methodical thinking*, intellectual flexibility, learning to learn, tacit skills, such as familiarity with material*)

personality dimension:
-showing individual behaviour (self-reliance*, sense of responsibility*, precision*, self-confidence, decisiveness*, exercising initiative*, coping with stress*, creativity*, imagination, willingness to achieve, perseverance, modern citizenship)

socio-communicative dimension:
-communication (ability to express oneself orally*, ability to express oneself in writing*, having a knowledge of modern languages*) and the ability to work together with colleagues, managers and clients (social skills*, solidarity, empathy)

socio-normative dimension:
-ability to adapt oneself to the corporate culture (loyalty, identification, dedication, complying with safety measures*, readiness to take part in further training*, presentability*, knowledge of the organization*)

strategic dimension:
-emancipatory behaviour: showing a critical attitude to work and one's own interests (dealing critically with choices in the technical field and the effects they have*; taking an active part in decision-making and promotion of interests)

The key qualifications with * were part of the policy Delphi (see under method)

Van Zolingen (1995) speaks of *key* qualifications to emphasise their broad applicability within an occupation. This refers to their applicability in new situations (different jobs), the accessing of specific knowledge and of new knowledge, partly through increased opportunities for communication during one's entire career. There is thus talk of a horizontal component (of place): broad applicability, and of a vertical component (of time): acquisition, development and application during one's entire career. Key qualifications specifically involve qualifications that are necessary to practise an occupation. It is essential that key qualifications be acquired within the framework of an *occupation* (during initial training, and during and outside work) and be further developed as regards occupational content. One great advantage of the contextual acquisition of key qualifications is that, under the right learning conditions, the problem of transfer is reduced. This opens up possiblities for acquiring key qualifications during work based learning and for just-in-time learning in an active learning process.

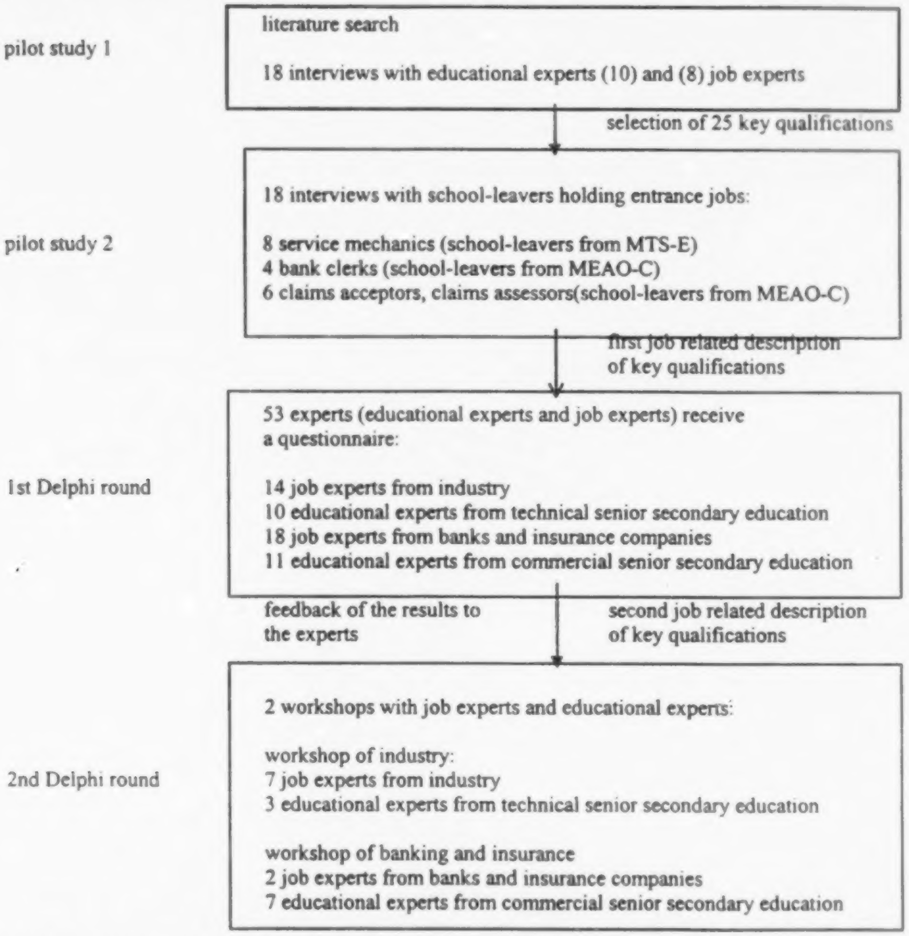
Research Questions

Above a new definition of key qualifications is developed based on a literature search. Recent developments in theory and in business were taken into account. The next step was to verify the possibility of operalization of these key qualifications, their importance, and when and how these key qualifications can be acquired best in the opinion of experts. In this paper we present data to discuss the questions: What are the implications for HRD of the importance of key qualifications for employees that cannot fully be acquired and/or developed at school? And in what way can key qualifications be developed and acquired during a vocational career?

Method

Van Zolingen (1995) studied key qualifications with a policy Delphi (see Figure 2). In this study a number of key qualifications has been operationalized within the context of a few selected vocations (service mechanic in the industrial sector, bank clerk, and claims acceptor and claims assessor in the insurance sector) and a few selected specializations of senior secondary vocational education. The selected specializations were MTS-E, the specialization 'electronics' in technical vocational training on secondary level and MEAO-C, the

Figure 2. Policy Delphi



pilot study 1
literature search
18 interviews with educational experts (10) and (8) job experts
selection of 25 key qualifications
pilot study 2
18 interviews with school-leavers holding entrance jobs:
8 service mechanics (school-leavers from MTS-E)
4 bank clerks (school-leavers from MEAO-C)
6 claims acceptors, claims assessors(school-leavers from MEAO-C)
first job related description of key qualifications
1st Delphi round
53 experts (educational experts and job experts) receive a questionnaire:
14 job experts from industry
10 educational experts from technical senior secondary education
18 job experts from banks and insurance companies
11 educational experts from commercial senior secondary education
feedback of the results to the experts
second job related description of key qualifications
2nd Delphi round
2 workshops with job experts and educational experts:
workshop of industry:
7 job experts from industry
3 educational experts from technical senior secondary education
workshop of banking and insurance
2 job experts from banks and insurance companies
7 educational experts from commercial senior secondary education

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specialization 'commerce' in business training on secondary level. First the four occupations were selected after a number of interviews with experts in the first pilot study. Then in the second pilot study descriptions of the different key qualifications were made based on extensive interviews with school-leavers working in entrance jobs (not longer than 3 years after leaving school certificated). The third step was to send the 53 experts a questionnaire (32 job experts and 21 educational experts) with te descriptions of the key qualifications. People were qualified as expert when they had been working in this area for at least 2 years and had extensive knowledge of the job (the job experts) or of the differentiation in vocational education concerned (MTS-E or MEAO-C) (the educational experts). The experts were asked to polish the descriptions of the key qualifications, and to give their opinion on how important key qualifications are for the selected occupations and when and how they can best be acquired. In the fourth step, the workshop, job experts and educational experts discussed the differences in opinion and clarified some answers of the questions of the questionnaire from the first Delphi round.

Results

Table 1. When, at School or After School, can Key Qualifications Best Be Acquired According to Job Experts (expressed as percentages)

Key Qualification	*Job Experts from Industry*		*Job Experts from Banks*	
	N = 14		*N = 14*	
	At School	*After School*	*At School*	*After School*
	(%)	*(%)*	*(%)*	*(%)*
general-instrumental dimension:				
-the ability to plan work	57	43	44	50
-the ability to handle information	72	21	71	14
-quality awareness	64	28	43	43
-commercial insight	21	64	50	29
-inter-disciplinary knowledge	78	14	50	29
cognitive dimension:				
-abstract thinking	29	7	65	7
-methodical thinking	57	14	65	22
-identifying and solving problems	57	36	44	28
-familiarity with material	85	7	-	-
personality dimension:				
-self-reliance	36	14	7	36
-sense of responsibility	36	14	28	7
-precision	71	0	43	14
-decisiveness	21	36	7	72
-exercising initiative	21	29	50	14
-coping with stress	14	36	21	42
-creativity	21	14	14	0
socio-communicative dimension:				
-social skills	35	21	50	14
-ability to express oneself in writing	64	0	93	0
-ability to express oneself orally				
-having a knowledge of modern languages	64	7	86	0
socio-normative dimension:				
-complying with safety measures	71	14	22	71
-readiness to take part in further training	14	42	14	43
-presentability	21	29	50	14
-knowledge of the organization	21	78	43	50
strategic dimension:				
- showing a critical attitude to work and one's own interests	28	43	29	50

When to Acquire Key Qualifications. An important result is that it appeared very well possible to operationalize and contextualize the different key qualifications for the selected occupations and to reach consenus with the experts about their descriptions. Another major finding of the policy Delphi is that the experts believe that secondary vocational education (both the theoretical and practical components) should play an important role in the acquisition of key qualifications As an illustration we present here a few data on the opinions of the job experts from industry (N = 14) and the job experts from banks (N = 14) derived from the questionnaire of the first Delphi round (Table 1). The experts were asked when the different key qualification can best be acquired: before school, at school (secondary vocational education), or after school during one's vocational career. In the table only the last two answering categories are reproduced. For example according to 72% of the job experts from industry en 71% of the job experts from banks the ability to handle infomation can very well be acquired at school (secondary vocational education). According to 21% of the job experts from industry and 14% of the job experts of banks the ability to handle information can better be acquired after leaving school (Table 1). The opinion of the educational experts (not presented here) is even stronger on this point. They are even more convinced than the job experts that many key qualification can best be acquired in school. Yet during the workshops it became clear that the experts hold that senior secondary vocational education can only provide a theoretical basis for a number of the key qualifications. These key qualifications are further developed in everyday practice on-the-job or with the help of coaching and training off-the-job during a person's vocational career. The key qualifications involved here are chiefly those of the personality dimension, the social-normative dimension, the strategic dimension and the key qualifications quality awareness and commercial insight of the general instrumental dimension. Key qualifications, which according to the experts during the workshops, are hardly acquired at school but are particularly obtained and/or developed further during a person's vocational career are: decisiveness, the ability to cope with stress, showing initiative, commerical insight, the ability to plan work, having knowledge of the organization, complying with security measures, a critical attitude to work and one's own interests and readiness to take part in further training.

How to Acquire Key Qualifications From the literature search and the discussions with the experts during the workshops we developed ideas about acquiring and further developing key qualifications during the vocational career. Acquiring and developing key qualifications by reflection upon core problems by employees seems to be a promissing new development (Onstenk et al. 1990). The idea originated in two different theoretical lines of thinking: the theory of contextbound cognition (Collins et al. 1989) and the "Handlungs' theory (Laur-Ernst, 1989). We will not elaborate upon these theories here. As we already mentioned employees have to be capable to handle unexpected and often complex problems in relation to products and customers. Onstenk named them core problems. Core problems are problems, an employee is confronted with frequently, that are characteristic for an occupation and of which an employee is supposed to find a solution and an approach. Core problems are about situations in which choices have to be made and in which more than one solution is possible. The employee is placed in a dilemma. The choices made in handling such a dilemma determine if he performs well. Usually many key qualifications are needed to handle core problems adequately. So in our opinion core problems are an outstanding example of for an occupation characteristic situations in which employees need (many) key qualifications.

Conclusions

This study has several implications for HRD practitioners. We will mention them in the context of the major results of the study.

A first major outcome of the study of Van Zolingen is that HRD practitioners should pay attention to key qualifications in corporate training, because key qualifications are acquired by employees during a proces of lifelong learning. In the opinion of the 53 experts some key qualifications are partly or wholly acquired at school. Some key qualifications can only be acquired during ones career and other key qualifications are theoretically acquired at school and have to be developed further during ones career. From our research it follows that HRD should pay extra attention to key qualifications such as: decisiveness, the ability to cope with stress, showing initiative, commerical insight, the ability to plan work, having knowledge of the organization, complying with security measures, a critical attitude to work and one's own interests and readiness to take part in further training. These results indicate that the growth of new (structural) links between the educational system and organizations to allow a better coherence between initial education and further training is getting more important (see also Resnick & Wirt, 1996). Further HRD practitioners should pay attention to key qualifications that have to be further developed during an employees' career such as the key qualifications of the personality dimension, the social-normative dimension, the strategic dimension and the key qualifications quality awareness and commercial insight of the general instrumental dimension.

A second major outcome of the Delphi study is that with a new definition of key qualifications it is, in contrast with Mertens definition (1974), very well possible to operationalize key qualifications for vocational curricula and corporate training based on the information of school-leavers and experts collected during a policy Delphi. It must be mentioned that existing methods of analysing jobs and tasks are in our opinion to little directed to the detection and operationalization of key qualifications, because they fragment jobs in very little units of knowledge and/or skills (Carlisle, 1986). Characteristic of key qualifications is that they are broader and more elusive than pure knowledge or pure skills. We think that for HRD practitioners it is very usefull to apply the Delphi method supplemented with 2 two pilot studies to analyse jobs next to the more simple existing job analysis methods to identify en describe key qualifications. Yet we are not fully satisfied with this method because key qualifications form a 'whole' when they are applied in a job and this whole differs in shape when different combinations of key qualifications are applied in different situations by an employee. That is why our attention is shifting now to the possible role of core problems in identifying and describing key qualifications in the context of an occupation (Blokhuis & Van Zolingen, 1997).

This role of core problems is the third outcome of the study that is important to HRD practitioners and managers. We think that HRD practitioners and managers should realise that acquiring key qualifications can be stimulated by adequate job design characterized by confrontation with and reflection upon core problems by employees during work or training courses. In the literature Brater & Bauer (1990) point out that new developments in organizations may have a positive influence on the personal development of employees. The broadening of tasks and reponsibilities, that follow downsizing or lean production create in their opinion opportunities for employees to develop their abilities [read: key qualifications]. Yet others are of the opinion that many new developments in organizations only put more pressure on employees who have to be extremely flexible, are fully responsible for their employability and must stay motivated to keep learning (Geißler, 1990). We have the opinion that it is possible to adopt a middle course by designing jobs in such a way that employees are confronted with core problems, that they get the full responsibility to handle them and (this is essential!) that they get enough possibilities to reflect upon core problems to broaden their experience and to learn to handle core problems adequately. The role of HRD practitioners will in our opinion on the one hand be to learn line managers how to coach employees in reflection upon the handling of core problems and on the other hand to identify core problems and to create training courses containing core problems and pay attention to the key qualifications needed to handle these core problems. These training courses should not only be directed to individual learning but also on finding solutions for core problems in [interdisciplinary] groups. In our opinion it is a very important research topic for the near future to develop a method to identify and describe the core problems of a job (Blokhuis & Van Zolingen, 1997).

References

Appelbaum, E., & Batt, R. (1994). *The new American workplace. Transforming work systems in the United States.* Cornell: Cornell University Press.

Blokhuis, F.T.L., & Van Zolingen, S.J (1997) *De kern te pakken. Sleutelkwalificaties, kernproblemen en de landelijke kwalificatiestructuur* [Gripping the core. Key qualifications, core problems and the national qualification structure]. 's-

Hertogenbosch/Enschede: CINOP: Centre for the innovation of training, University of Twente, Faculty of Educational Science and Technology, Department of Curriculum.

Brater, M., & Bauer, H.G. (1990). Schlüsselqualifikationen - Der Einzug der Persönlichkeitsentwicklung in die berufliche Bildung? [Key qualifications - The entrance of personal development in vocational education?] In H. Herzer, G. Dybowski, & H.G. Bauer (Hrsg), *Methoden betrieblichen Weiterbildung* [Methods in corporate training] (pp. 198-222). Eischburn: RKW.

Carlisle, K.E. (1986). *Analyzing jobs and tasks*. Englewood Cliffs, N.J.: Educational Technology Publications.

Champy J.& Hammer, M. (1993). *Reengineering the corporation*. New York: Harper Collins.

Child, J., & Loveridge, R. (1990). *Information technology in European services*. Oxford: Basil Blackwell.

Collins, A., Brown, J.S., & Newman, S.E. (1989). Cognitive apprenticeship: Teaching the crafts of reading, writing and mathematics. In L.B. Resnick (Ed.), *Knowing, learning and instruction* (pp. 453-494). Hillsdale, N.J.: Lawrence Erlbaum Associates.

Deming, W.E. (1986). *Out of crisis*. Cambridge: Cambridge University Press.

Geißler, K.A. (1990). Mit dem Qualifikations- "Schlüssel" nach oben. [Up with the qualfication key.]*Frankfurter Rundschau*, p.35

Gilley, J.W., & Eggland, S.A. (1989). *Principles of human resource development*. New York: Addison Wesley.

Kern, H., & Schumann, M. (1984). *Das Ende der Arbeitsteilung? Rationalisierung in der industriellen Produktion* [The end of Taylorism. Rationalization in the industrial production]. München: Beck.

Laur-Ernst, U. (1984). *Entwicklung beruflicher Handlungsfähigkeit* [Developing vocational competence]. (diss.) Frankfurt am Main: Peter Lang.

Mertens, D. (1974). Schlüsselqualifikationen. Thesen zur Schulung einer modernen Gesellschaft [Key qualifications. Remarks on education for a modern society]. *Mitteilungen aus der Arbeitsmarkt- und Berufsforschung*, (7), 314-325.

Nijhof, W.J. & Streumer, J. (Eds.) (1994). *Flexibility in training and vocational education*. Utrecht: Lemma.

Nijhof, W.J. & Streumer, J. (Eds.) (1998). *Key qualifications in work and education*. Dordrecht/Boston: Kluwer Academic Publishers.

Onstenk, J. (1997). *Lerend leren werken. Brede vakbekwaamheid en de integratie van leren,werken en innoveren* [Learning to work learning. Broad professionalism and the integration of learning, working and innovation]. (diss.) Delft: Eburon.

Onstenk, J.H.A.M., Moerkamp, T., Voncken, E. & Dool, P.C. van den (1990). *Leerproces-sen in stages* [Learning processes during practical training]. Amsterdam: SCO.

Reetz, L. (1989). Zum Konzept der Schlüsselqualifikationen in der Berufsbildung (Teil I, II). [The concept of key qualifications in vocational education] *Berufsbildung in Wissenschaft und Praxis*, *18*(5, 6), 3-10 en 24-30.

Resnick, L.B., & Wirt, J.G. (Eds.) (1996). *Linking school and work. Roles for standards and assessment*. San Francisco: Jossey Bass.

Rothwell, W.J. (1996). *Beyond training and development: state-of-the-art strategies for enhancing human performance*. New York: Amacom.

Soden, R. (1994). *Teaching problem solving in vocational education*. London: Routledge.

Womack, J.P., Jones, D.T. (1996). *Lean thinking*. New York: Simon & Schuster.

Zolingen, S.J. van (1995). *Gevraagd sleutelkwalificaties. Een studie naar sleutelkwalificaties voor het middelbaar beroepsonderwijs.* (*Wanted: key qualifications. A study of key qualifications for upper secondary vocational education and training*). (diss.) Nijmegen: UDN, Katholic University, Nijmegen.

Zuboff, S. (1988). *In the age of the smart machine. The future of work and power*. New York: HarperCollins, BasicBooks.

Analyzing Career Paths of Corporate University Senior Training Executives

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This article reports the interviews of fifteen senior training executives from *Fortune 500* *corporate universities describing their career paths, education, career obstacles, and essential personal and professional characteristics and competencies. This study will be of interest to those aspiring to an executive position in training, organizations developing a senior training position, and universities guiding Human Resource Development professionals.*

Throughout the working lives of employees, in any organization, the employees are constantly maneuvering through patterned sequences of roles or positions which most often have something to do with work content (Walker, 1992). The process of moving through these roles is the basis of a *career path*. In order for a person to have a career path, there is no need for the succession of jobs to be planned or to be written. In other words, every employee has what amounts to a career path as they proceed through a succession of roles (Walker, 1992).

This study is a contribution to the field of career research, which is an area of study whose base is in the interpretation of the relationship between the individual and the organization (Arthur, Hall, & Lawrence, 1989). The aim of the study, however, is to describe the sequence of jobs individuals hold in the area of training as well as to analyze the components and competencies which comprise and contribute to their working lives (a basic definition of a career (Hall, 1976)). This investigation is a descriptive, status study that examines the career paths and certain related factors of senior training executives.

Most Human Resource Development professionals appear to be either focused on the area of training and development in the business and industrial sector or the area of training and development in formal higher education (Wallington, 1981). Wallington determined that most Human Resource Development professionals work exclusively in one of these areas and not the other. However, he concluded that it would be ideal for the Human Resource Development professional to gain an understanding of both of these areas. A trend in the field of training has been occurring the past decade in which individuals are developing this dual understanding (Bassi, Benson, & Cheney, 1996); and consequently, curriculum has been developed that has produced the professional trainer and the Human Resource Development specialist, and ultimately the senior training executive.

By examining their career paths, a certain amount of detail has been identified about the career development of senior training executives. The importance of this study is apparent in several different ways. The findings of the study may be used to inform and guide individuals who aspire to become a senior training executive of an organization. The study's results will show an individual the different routes that senior training executives have taken to achieve their current positions. For example, if the findings of this study suggest that an individual who has worked in line positions or other positions prior to becoming senior training executive, and that they found it helpful to follow this type of path because it made their training tasks more effective since they have actually "been there", then this information will benefit the aspiring senior training executive. Also, the study will help companies who seek to hire a senior training executive. It will aid companies in personnel selection within their organization as they use the study findings to compare applicants' career paths. Also, the study will be useful to universities wishing to offer programs which prepare individuals for careers as training executives. Finally, the study will build and add to the already existing studies and information concerning trainers and Human Resource Development professionals.

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Research Questions

The study described in this article centered on examining the career paths of senior training executives of corporate universities. The following research questions were addressed:

1. What are the educational backgrounds of senior training executives at corporate universities?
2. What is the job succession of a senior training executive?
3. What do senior training executives perceive to be important competencies and characteristics in their career advancement?
4. What are the major obstacles encountered by senior training executives in their career progression?

Methodology

Research Design. The researcher used a descriptive survey design for this study. An interview method was used to gather information from senior training executives at corporate universities via the telephone and fax. By using this interview method, there was a greater chance of receiving a 100 per cent response rate and achieving more in-depth data as well as the added opportunity to ask follow-up questions.

Subjects. The target population for this study was all senior training executives at corporate universities. The accessible population, from which the sample was drawn, included senior training executives at Fortune 500 corporate universities. A corporate university is defined as "an umbrella for a company's training programs which embody a philosophy of continuous learning and ultimately a lever for cultural change. Furthermore, corporate universities represent a best in class effort to train all levels of workers in the skills, knowledge, and competencies they will need to be successful in their current jobs and be able to adapt to future job requirements" (Meister, 1994). The senior training executive at these universities is defined as the individual ultimately responsible for the development and implementation of training. A preliminary study had been conducted in order to identify the Fortune 500 companies that have a corporate university. From those companies who responded to the preliminary survey and identified themselves as having a corporate university, executives from fifteen companies agreed to participate in this study. Contacts were made through personal referrals, literature review, and "cold calls".

Limitations. This study was concerned with the career paths of fifteen senior training executives of organizations which have corporate universities. Given the relatively small number of participants, caution should be exercised in generalizing study findings to organizations and careers outside of the study.

Prior to beginning the interview process with study participants, all of the companies were categorized according to their type of businesses, using Standard Industrial Classification codes. Of the fifteen companies in the study, two were National Commercial Banks (13.3%) and two were Groceries and Related Products (13.3%). The eleven remaining companies each represented one of the following categories, each accounting for 6.6% of the total population: Newspapers, Variety Stores, Bank Holding Companies, Pressed and Blown Glass and Glassware, Eating Places, Industrial and Commercial Machinery, Electronic Parts and Equipment, Personal Credit and Savings Institutions, Electronic Computers and Computer Terminals, Office Machines, and Motor Vehicles and Car Bodies.

Instrumentation. Data for this study was collected through the use of an interview questionnaire. The questionnaire was developed by the researcher in collaboration with three other graduate assistants and the research advisor. The questionnaire contained four sections that aimed to identify the senior training executive's educational background, career path information focusing on their previous positions, special competencies/characteristics they believe have positively affected their career paths leading to their current positions, the top three to five characteristics they believe have helped them to progress in their field, and finally any possible obstacles they may have encountered as they have proceeded in the succession of their professional experiences.

Data Collection. The researcher began by identifying the senior training executive at each corporate university through personal referrals, literature review, and "cold calls". An interview guide was designed to be used with all fifteen of the subjects in the study. Each senior training executive was called at his/her office in order to conduct a structured interview via the telephone. On average, each participant's office was called twice before making contact. The average length of each interview was approximately ten minutes. The interviews were conducted between June 23, 1997 and July 18, 1997.

Data Analysis. With respect to the data analysis of the quantitative portion of the study, the researcher analyzed the results using descriptive statistics to determine the frequencies, median, mean, mode, and percentage of corresponding responses. For the open ended questions, a classification system was set up to analyze the responses.

Results. The results of this study are discussed in four major sections: participants' Career Path Information, Education of study participants, essential Competencies and Characteristics identified by study participants, and Obstacles encountered by participants as they have proceeded in their succession of professional experiences.

Current Positions. The fifteen study participants were grouped according to their current position title. Three of the participants were called Director of "*" University (20%). Two were called Director of Training (13.3%). The following titles each accounted for one of the remaining participants (each title representing 6.6% of the total population): Senior Training Consultant, Manager of Education Systems, Manager of "*" Training Institute, Vice President of Planning and Development, Director of Human Resources Effectiveness/Education, Manager of Training and Organization Development, Director of Leadership Development, Vice President of Training and Development, Manager of Training Delivery, and Assistant Director of Training.

Through the identification of current position titles, it became apparent that the individuals who were responsible for the development and implementation of training at corporate universities had varied titles, even though their specific job duties and responsibilities were similar. The names of specific companies within the participants' titles were withheld in order to ensure confidentiality.

The overall number of employees that each of the participants currently supervised varied greatly. The average number of employees that each senior training executive supervised was 45 employees. The range of number of employees supervised was from 9 employees to 200 employees. The standard deviation was 47.1.

The fifteen senior training executives who participated in the study were asked the number of years they have spent in their current positions. The range of years spent in current positions was 2 months-9 years. The mean average was 3.5 years, with a standard deviation of 2.44 years.

Previous Positions. With regard to the previous positions held by senior training executives, they were asked to indicate the positions that they believed related to their achieving their current positions. It should be noted that as the researcher talked with the participants, they indicated that they wanted a focused conversation which dealt with only those jobs they believed helped them to obtain their current positions. In other words, they did not want to talk about their entire job history. In order to accommodate their desire to be efficient in interview discussions, they were asked only about training related positions. They were asked also to identify any non-training positions or experiences they had which they believed to be particularly pertinent to achieving their current positions; and, usually these assignments where the factors which initially qualified them to enter training. Their responses are as follows:

Respondent I. Prior to his initial training assignment, he worked as a line operations manager in the same industry that he is in currently. At that company, he was promoted to

Director of Employee Development for "*" Management Institute where he served for five years The next training related position held by this respondent was Vice President of Training and Development at another company, where he stayed for three years. Currently, Respondent I is the Director of "*" University at another company, and has been in this position for a total of three years.

Respondent II. Prior to her initial training assignment, Respondent II received a degree in education. Her first training related position was as a Trainer for two years. She then was a Senior Trainer for an additional two years and has held her current position as a Senior Training Consultant for nine years. All her training related employment has been with the same company.

Respondent III. This respondent was prepared in industrial education and curriculum design. He entered the training field as an Educator and Trainer. Most recently he has been Manager of Training and Development for a specific division of a company where he stayed for six years. Next, he became the Director of "*" University at another company, for four years. His third training related position, which he was in for five years at another company, was as Director of Executive Development. He has now been the Director of "*" University for one year at yet another company.

Respondent IV. Prior to his initial training assignment, Respondent IV was a Retail Systems Specialist. He became Manager of an Information Center and was a Computer Operations Trainer for six years. He is now the Manager of Education Systems, where he has been for three years. These assignments have all been at the same company.

Respondent V. Respondent V began his career in the company warehouse as a laborer. He was promoted to his first training related job as an Assistant District Operating Manager for two years. The next training related position was as District Quality Manager for two years. He is now the Director of Training for "*" University and has been in this position for two years. All these positions have been with the same company.

Respondent VI. Respondent VI was a journeyman machinist which helped gave him a technical background that he utilized and to help him qualify for his first training related position as a Training Instructor or Technical Trainer for three years. An additional training related position he held was as Corporate Manager of Management Development for four years. His third position was as Manager of Human Resources Planning for five years. He has been in his current position for four years as Manager of "*" Training Institute. All his training positions have been with the same company.

Respondent VII. With a degree in education, Respondent VII began his career as a Trainer for three years. The next position was as a Training Specialist and then a Senior Trainer for four years at another company. He then was a Training Manager for four years at another company and is currently with the same company as the Vice President of Planning and Development and has been in this position for a total of seven years.

Respondent VIII. Respondent VIII was prepared in education and earned a doctorate degree. She began in the field of training as an Independent Training Consultant for six years. The next position was as Corporate Head of Management Leadership Training for eight years. She is now the Director of "*" University and has been in this position for two years. All of these positions have been with the same company.

Respondent IX. This respondent was prepared in education and began her career in what she indicated as her first training related position as Manager of Organization Consulting for three years. The next training related position was as Manager of Strategic Corporate education for two years. The next position was as Director of Corporate Education for three and one half years. She has been in her current position as Director of Human Resources Effectiveness and Education for two years. All of these positions have been with the same company.

Respondent X. Respondent X began as a Manager Trainee with the same company that he is with currently. This led to his first training related position as a Field Service Manager for three and one half years. His next position was as a Staff Director for one and one half years. He is currently the Director of Training for "*" University and has been in this position for two and a half years. All of his training related positions have been with the same company.

Respondent XI. Prior to entering the training field, this respondent worked as an Assistant Director of Student Activities. Her first training related position was as Manager of Business Education for one year, at another company. She then was a Training Specialist for three years at another company, followed by a Director of Human Resources for six years at another company. She has been in her current position as Manager of Training and Organization Development for six years at still another company..

Respondent XII. Respondent XII initially qualified to enter training by working as Manager of Documentation in Training and Development for three years. He held an additional training related position as Manager of Field Training for three years. He currently holds the position of Director of Leadership Development and has been in this position for four years. All of these positions have been with the same company.

Respondent XIII. This respondent initially qualified to enter training as she worked in human resources as an interviewer. Her first training related position was as a Trainer for two years. A second training related position held by this respondent was as Director of General Management Training Programs for one year. A third position was as Director of Human Resources for four years. She is currently the Vice President of Training and Development and has been in this position for six weeks. All of these positions have been with the same company.

Respondent XIV. Respondent XIV believed that his experience in sales qualified him for his first training related position as an Instructor for "*" Company. His next training related position was a Manager of Training and Development where he stayed for fifteen years. He is now a Manager of Training and Delivery where he has been for nine months. All of these positions have been with the same company.

Respondent XV. Respondent XV stated that her qualifying employment was in the area of recreation management. This led to her first training related position as a Trainer for eleven years. She then changed companies to become a Director of Training for eight years. At another company, and currently, she is the Assistant Director of Training at "*" University and has been in this position for five years.

The above career path information about each of the fifteen respondents indicates that only a few of the senior training executives have a history of job changes in their training related careers. Participants, on average, indicated that they have had three or four positions in training.

The average number of years that the participants spent in their first training related job was 4 years. The range for this category was 1-11 years, while the standard deviation was 2.5 years. In addition to their first training related jobs, all of the participants, except for one, have had additional training related jobs. Six out of the fifteen participants have had a second additional training related position prior to achieving their current position. With regard to the number of years that the participants have spent in additional training related positions, the average was 6 years. The range for additional training related jobs was 1-15 years, and the standard deviation was 3.45 years. Education. The fifteen senior training executives were asked several questions about their educational backgrounds. They were asked to indicate their educational level or degrees they have earned. In addition, they were asked to specify the fields in which their degrees were earned. Also, they were asked to indicate the number of college credit semester hours they have had in Human Resources and/or Training.

Eight of the participants, (53.3%), have achieved a Bachelor's degree. The following fields were identified by the participants who had earned up to and through a Bachelor's degree: Education, Business Data Processes, Biology, Industrial Education, Business Administration, Business Management, and Accounting.

Of the remaining participants, five (33.3%) earned Master's degrees in the following fields: Business Administration, Organization Development, Organization Behavior and Adult Education, Curriculum Development, and Electrical Engineering. Two participants (13.3%) earned Ph.D.'s in Sociology.

The number of college credit semester hours earned in Human Resources and/or Training by the fifteen Senior Training Executives ranged from zero to sixty. Seven of the participants had zero college credit semester hours in Human Resources and/or Training. One participant had earned three hours, another completed six hours of Human Resources/Training courses, and another completed 12 hours of credit. Two of the participants earned 15 hours of credit, while the remaining three participants earned 30 hours, 40 hours, and 60 hours, respectively, of college credit. The mean for the number of college credit semester hours earned in Human Resources and/or Training was 12.1. The range was 0 hours to 60 hours, while the standard deviation was 18.1.

Competencies. The senior training executives were asked to identify any special competencies which they believed had positively affected their career paths leading to their current positions. A total of thirty competencies were identified by the fifteen participants.

When analyzing this data, it became evident that in recording the responses of each respondent who had been asked to indicate special and important competencies and characteristics, an additional step which asked the respondents to review and refine the combined list of responses might prove informative. Respondents were given the combined lists of competencies and characteristics and asked to identify the five in each list considered to be absolutely essential in career progression in the field of training. Thirteen responses were received to the second survey.

The following were reported in response to which Competencies are absolutely essential: ten respondents (77%) indicated interpersonal skills, eight (62%) indicated communication skills, six (46%) indicated basic understanding of business, as well as credibility, five (38%) indicated persistence and hard work, continual learning, flexibility, and creativity, four (31%) indicated honesty, three (23%) indicated willingness to change, technical understanding, and innovative, and two respondents (15%) indicated humor.

Characteristics. In addition to the question regarding competencies, the participants were also asked to indicate the most important personal characteristics that had helped them to progress in their field. The fifteen participants identified a total of 26 characteristics that they thought were important to the professional working in the area of Human Resources and Training.

The following were reported in response to which Characteristics are absolutely essential: nine respondents (69%) indicated *interpersonal skills*, seven (54%) indicated *communication skills*, six (46%) indicated *basic business knowledge, leadership skills, and consultation skills*, five (38%) indicated *understanding of business/instructional technology, knowledge of curriculum design, and project management skills*, four (31%) indicated *desire for improvement*, as well as *coaching skills*, three (23%) indicated *a systems view on how things operate*, two (15%) indicated both *facilitation skills* and *being visionary and proactive*, and one respondent (8%) indicated *public relations skills*.

Obstacles. The fifteen senior training executives were asked to indicate any career obstacles which they had encountered as they have proceeded in their succession of professional experiences. Only nine of the participants reported having encountered obstacles throughout their careers. *Organization politics* was identified by two of the participants as being the greatest obstacle encountered. This obstacle (*organization politics*) accounted for 22.2% of the total responses. The remaining obstacles each received one response; each accounting for 11.1% of the total responses. The following obstacles were indicated: *resistance to new training within the organization, no focus on growth by the company, not having a formal education, no place for training in the organization, having a formal education/advanced degree, training is handled as expense not an asset,* and *being a female in a trucking-based industry*.

Discussion

There appeared to be patterns in the careers of the respondents. The corporate university senior training executives participating in this study have been in the field of training for an average of twenty years. The majority of the participants had been in their current positions fewer than six years. It became apparent that only a few of the senior training executives have had significant positions outside of the field of training or company job changes in their training careers. The participants, on average, indicated that they have had three or four positions in the field of training. Furthermore, the participants' responsibilities were very similar, due to the fact that they all work within corporate universities. The majority of the senior training executives had established tenure with their organizations. In other words, they have had a succession of jobs in training in the same organization.

Although the senior training executives represented a variety of industries, and the titles of the senior training executives and the number of employees that each participant supervised all varied, their basic missions and responsibilities were similar in that they were accountable for the overall development and implementation of training for their organizations. It should be noted that one cannot be sure by title alone what the level of the assignment is in the training position hierarchy.

With respect to the education of senior training executives, all of the participants had a minimum of a bachelor's degree. Nearly half had either a master's degree or a doctor's degree. A common element in their education was that many seemed to have studied Education at some point while earning their degrees. Although all of the fifteen participants held college degrees, seven of the participants had not received formal college credit in Human Resources and Training. Moreover, three of the participants did have a great deal of college credit in this area. A great disparity exists between the level of formal education in Human Resources and Training among senior training executives.

The participants identified a number of key competencies which they thought had positively affected their career paths leading to their current positions and further identified those they considered to be absolutely essential in their careers. In addition to the key competencies identified by the participants, certain essential characteristics were also noted. Interpersonal skills, communication skills, and understanding business were mentioned as being important in both categories when participants were asked about important competencies and characteristics.

The senior training executives involved in this study identified only a few obstacles which they have encountered in their career progression. This small number of obstacles seemed reasonable in organizations which have successful corporate universities.

Implications/Recommendations

The findings from this study will be useful to individuals who are interested in pursuing careers in the field of training. A review of the career paths of the participants may be helpful in guiding individuals in terms of planning their future objectives. One may find it beneficial to study Human Resources and Training at the university level, to obtain employment experiences in training related positions, and to develop competencies and characteristics deemed important by incumbent senior training executives. Also, the individual who seeks to develop a career in training should recognize that seniority in an organization appears to be a factor in job promotion and in achieving the position of senior training executive.

The study will also help organizations who are interested in executives currently managing corporate universities. Organizations may find the career preparation of senior training executives a useful reference when establishing position descriptions for their particular organization. Employers should be able to recognize the patterns of career development of successful senior training executives. This information may serve as a blueprint for the career development of future leaders in training. In addition, understanding the desirable competencies and characteristics as expressed by successful senior training executives should prove useful in identifying candidates for senior training executive responsibilities.

A review of the information in this study may be of value to universities in developing curriculum for both aspiring and incumbent training executives. Human Resource Development departments at universities can examine the competencies and characteristics identified by senior training executives, and build units of instruction and courses that focus on any number of these. By doing this, individuals participating in the university programs will be more likely to develop the key competencies and characteristics that they need to succeed in the field of Training. In identifying a potential senior training executive or in training a potential senior training executive, special attention should be given to the identified essential competencies and characteristics.

University Human Resource Development programs should assist student employment experiences in the field of training by providing internships and job placement opportunities. University liaison with business and industry training executive resource persons may be developed by encouraging training executives to participate in human resource development program advisory board, by giving guest lectures, or by teaching as adjunct instructors.

Knowledge of desired industry skills, competencies and characteristics is useful in developing objectives in a training program. There may be some value in professional training organizations defining training positions so that organizations may elect to utilize standard position classifications for their training executives. Professional organizations' credit and non-credit training programs should incorporate the topics identified by this study in their professional development activities.

Additional research should be done in this area among senior training executives in organizations with corporate universities. While fifteen organizations were selected for this study, a recent study showed that a total of twenty Fortune 500 companies have corporate universities.

The participants of this study are an important resource to those interested in Human Resource Development. They should be nurtured and utilized thoughtfully so as to maintain good future relations and lines of communication.

References

Arthur, M. B. (1989). Handbook of career theory. New York: Cambridge University Press.

Bassi, L., Benson, G., Cheney, S. (1996). Trends: position yourself in the future. Training and Development, 11 (50), 28-50.

Bateson, M. C. (1989). Composing a life. New York: Penguin.

Froiland, P. (1993). Who's getting trained? Training, 30 (10), 53-57.

Hall, D. T. (1976). Careers in organizations. Pacific Palisades, CA: Goodyear.

Louchheim, F. & Lord, V. (1988). Who is taking care of your career? Personnel Administrator, 33 (4), 46-51.

Meister, J. C. (1994). Corporate quality universities: Lessons in building a world-class work force. Alexandria: American Society for Training and Development.

Super, D. E. (1957). The psychology of careers. New York: Harper & Row.

Walker, J. (1992). Human resource strategy. New York: McGraw-Hill.

Wallington, C. (1981). Training real world trainers from the ivory tower. Invitational Conference on Academic Practitioners in Training and Development/Human Resource Development, Williamsburg, VA. (ERIC Document Reproduction Service No. 205 814)

Preparing Tomorrow's HRD Professionals: Perceived Relevance of the 1989 Competency Model

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This article follows up on a 1991 study of competencies for trainers (Leach, 1993). University Council of Vocational Education faculty were asked to provide their perceptions of the importance of competencies and the extent to which these competencies are currently included in their HRD professional preparation programs. Of the 25 competencies used for both studies, 23 were rated as important in 1997, and 17 of these were perceived to be less than adequately covered in course work.

The field of vocational and technical education has evolved significantly in the past decade to place greater emphasis on preparation of individuals for employment in business and industrial settings. In fact, several vocational and technical education departments in prominent universities have changed their names to embrace the human resource development role. Concurrent changes in the work place have had an impact on the roles of trainers in business and industrial settings and the competencies required of trainers to perform those roles effectively (Argyris, 1994; Baylen, Bailey, & Samardzija, 1996; Rhinesmith, 1994). The demand for employee training and development continues to increase. It is estimated that U.S. organizations will spend approximately $60 billion on formal training in 1997 -up from $43.2 billion in 1991 (Industry Report, 1997).

While many recent studies have addressed the issue of required competencies of trainers (Hodkinson, 1994; Kaeter, 1995; Mager, 1996; Marquardt & Engel, 1993; Olson, 1994), there does not appear to be consensus regarding what new skills are required for an HRD professional. The competencies identified in *Models for HRD Practice* (McLagan, 1989) appear to continue to provide the basis for preparation of HRD professionals. In 1991, Leach (1993) conducted a study published in *JVTE* to determine how vocational faculty at the university level were addressing the emerging need to prepare training professionals for business and industry. Respondents in that study perceived that 21 of the 25 competencies for trainers that were defined by McLagan in 1989 were important for graduates of their programs. Thirteen were considered important but not adequately covered in the curriculum taught by faculty in departments belonging to the University Council of Vocational Education (UCVE). The competencies used for that study were identified in *Models for HRD Practice* (McLagan, 1989). Although the study identified thirty-five competencies, thirteen were omitted because they were deemed to be too vague or too complicated to be accurately described on the questionnaire. All of the competencies except Evaluation skill, Media selection skill, and Budget and resource management skill were derived from the *Models for HRD Practice* study. These three competencies were included because they have been identified as important in other prominent research in the field (International Board of Standards for Training, Performance, and Instruction, 1988; McLagan, 1983).

- *Technical Competencies* - Adult learning understanding, Career development theories and techniques understanding, Competency identification skill, Computer competence, Electronic-systems skill, Evaluation skill, Media selection skill, Objectives preparation skill, Training and development theories and techniques, Training and development theories and techniques
- *Business Competencies* - Budget and resource management skill, Business understanding, Organization behavior understanding, Organization development theories and techniques

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- *Interpersonal competencies* - Coaching skill, Feedback skill, Group-process skill, Negotiation skill, Presentation skill, Questioning skill, Relationship-Building skill, Writing skill
- *Intellectual Competencies* - Data-reduction skill, Information-search skill, Visioning skill

Given the increased demand for trainers and for training functions in business and industry (Holton & Trott, 1996; Industry Report, 1997; Lynch & Cross, 1995; Mager, 1996; Manz & Sims, 1995; Robinson & Robinson, 1995) and the changes in the field of vocational and technical education (Carnevale & Stone, 1995; Rifkin, 1995; Tobin, 1996), the question arises as to the extent to which this classic list of competencies remains the basis for academic programs. Thus, using the 1989 model (McLagan, 1989) as a framework, this follow up study was conducted to determine what, if any, changes have occurred in terms of faculty members' perceptions of the importance of these competencies and the extent to which these competencies are covered in their curricula.

Review of Literature

A wealth of literature (Carnevale & Stone, 1995; Murnane & Levy, 1996; Rifkin, 1995; Tobin, 1996) addresses the ever-evolving trends in business and industry that result from changes in the global market place and in technology. Additional literature is beginning to address the need for training that will keep up with workplace evolutions (Holton, & Trott, Jr., 1996; Lynch & Cross, 1995; Manz & Sims, 1995; Robinson & Robinson, 1995). However, what has to emerge concurrently is sound practice for educating trainers who will design, implement, and conduct training in the business and industrial environment.

The academic community must also address the value and relevance of degree programs that prepare trainers to take their place in business and industrial environments (Baylen, Bailey, & Samardzija, 1996). Kaeter (1995) presented cases both for and against degrees in human resource development (HRD). Arguments on the side against degrees for HRD professionals suggested that preparation of trainers within academic institutions is too theoretical and not realistic enough. Trainers and executives cited in the article indicated that degrees in HRD do not prepare trainers for their "multidisciplinary roles" or prepare them with a whole set of skills they need--including flexibility, the ability to deal with personalities and politics in the work place, and the ability to work with intense deadline pressures (p. 68).

Kaeter's (1995) primary argument is that, because HRD is still in its infancy, confusion still reigns in the academic world that deals with HRD training. Even though the American Society for Training and Development has identified 11 subject areas to help prepare a person for a career in training (Kaeter, 1995), many programs in these areas are still "vaporous" (p. 74). The 11 subject areas identified are: administrative/educational leadership, adult education, career development, human resource development, human resource management with an emphasis in human resources development, industrial psychology, instructional design and development, instructional technology, organization communications, organization development, and vocational/technical education. Kaeter concludes by saying that these areas of study do not guarantee that graduates of these programs will come out with specific sets of competencies.

While there may be some consensus on areas of study for trainers, no definitive model for the emerging role of trainers (McLagan, 1996), for the competencies of trainers, or for levels of education required for trainers seems to have emerged since the 1989 model. Although Mager (1996) described what trainers of the next century should look like, he did not further define these desired characteristics in terms of specific competencies that would serve as a model for preparing trainers. The characteristics he suggested are: performance-oriented, technically skilled, socially skilled, self-employable, bilingual, and internationally qualified. Like many other descriptions of trainers, these characteristics, for the most part, closely parallel the four major areas of the 1989 model (technical competency, business competency, interpersonal competency, and intellectual competency), and Mager's descriptions reiterate much of what is already known about desirable competencies for trainers. However, the attention to bilingualism and international experience clearly reflect the more current trend to address more global issues in work force development.

Another article (Marquardt & Engel, 1993) related to competencies of trainers also focuses on needs that relate to the more global work place. Marquardt and Engel state that the competencies that make trainers effective in corporate America do not necessarily guarantee effectiveness in other cultural settings. These writers have identified 16 competencies (arranged within the areas of attitudes, skills, and knowledge) they believe will contribute to the success of HRD practitioners in cross-cultural settings. The three major groupings of these competencies (attitudes, skills that empower, and important areas of knowledge) address many of the same areas as the four major groups used by Leach in 1991. However, the individual competencies identified by Marquardt and Engel seem more interpersonal and cultural in nature than those competencies by ASTD in 1989.

Even amidst a contemporary educational environment rampant with the search for standards of performance at all levels, no clear model seems to have emerged to replace the competencies as they were defined in earlier studies and used by Leach in the 1991 study of competencies of trainers. While the role of trainers may change due to the changing context of the business environment (Argyris, 1994; McLagan, 1996; Rhinesmith, 1994), there is no indication that the previously identified competencies will be less valued. Even if they are supplemented with greater ability to function in cross-cultural roles and other abilities, the four areas of competency and most of the individual competencies still bear a great deal of relevance to competencies described in later studies. Thus, researchers determined that the use of this model was still beneficial for determining what competencies are important and to what extent they should be covered in academic course work related to the preparation of trainers.

The Problem

As training and development programs become increasingly prominent in business and industry and vocational teacher education programs take on the expanded role of preparing professionals for training and development positions, vocational teacher education programs must change accordingly. It is imperative that the evolving curriculum embrace the knowledge base and skills required to perform training functions, which continue to increase. The challenge is to validate what is important to include in the preparation of trainers for business and industry and to modify curriculum in ways that respond to changes and needs of the work place.

Purpose of the Study

The primary purpose of this study was to determine the extent to which vocational teacher education programs include appropriate knowledge and skill training to successfully prepare vocational educators for training positions in business and industry. More specifically, the intent was to assess the perceptions of vocational teacher educators regarding the importance of the competencies identified in the HRD competency model (McLagan, 1989) for graduates of their vocational teacher education programs. In addition, the vocational teacher educators were asked to provide estimates of the extent to which these competencies are covered in students' course work. The following research questions related to this purpose were addressed:

1. To what extent are the competencies considered important for program graduates?
2. To what extent are the competencies currently covered in course work?
3. Have perceptions regarding the importance of the competencies and the extent of coverage of the competencies changed since 1991?
4. Are there differences in perceived importance and perceived extent of coverage of the competencies between graduate courses and undergraduate courses?

Research Procedures

Participants. While it is recognized that the preparation of trainers is not limited to universities and is not exclusively conducted by vocational faculty, most university vocational and technical education departments place graduates of their programs in training positions in business and industry (Leach, 1993). Thus, participants selected for this study were faculty who teach in programs in institutions that are members of the University Council for Vocational Education (UCVE). During the spring of 1997, a survey instrument was sent to all faculty members from the nineteen UCVE institutions listed in the 1996-97 UCVE directory.

Because it is difficult in many institutions to identify clear distinctions between traditional vocational education areas and human resource development, it was decided not to eliminate any faculty from any program who were listed in the UCVE directory. Thus, the survey was mailed to all 430 faculty members within related UCVE departments. It was felt that faculty members were better able to eliminate themselves from participation in the study based on what they know about the content and purpose of their specific programs than to eliminate them based on affiliation with specific program titles.

Selection of participants for the 1997 study was slightly different from the 1991 study. In the former study, department chairs/heads from each of the UCVE institutions were contacted and asked to identify appropriate faculty members or program heads representing each vocational curriculum housed in their department (i.e. agriculture, business/marketing, health, home economics, industrial education, and technology) to complete the questionnaire.

Instrumentation. The instrument for this study was structured like the 1991 survey in order to accommodate comparison of perceptions of the same issues, namely the importance of the competencies and the extent to which they are covered in the curriculum. A three-column questionnaire was developed for the study. A list and brief definition of each of the twenty-five competencies to be assessed was provided in column two, in the middle of the questionnaire. In column one, respondents were asked to estimate extent to which each competency is covered in students' course work. In column three, respondents were asked to rate the importance of each competency for graduates of their vocational teacher education program. Based on comments from the 1991 study, the 1997 instrument also provided for separate responses for undergraduate and graduate studies.

Data Analysis. Using a four-point Likert-type scale, respondents were asked to indicate in column one of the questionnaire the extent to which they perceived each of the competencies is covered in students' course work. Respondents were asked to rate each competency as either not covered (1), covered somewhat (2), covered adequately (3), or covered extensively (4). In column three, respondents were asked to rate the importance of each competency for graduates of their programs as of either no importance (1), not very important (2), somewhat important (3), or very important (4). Competencies that received a ranking of □ 3.0 were considered important and adequately covered. The significance level for the study was set at a = .05.

Of the 430 surveys mailed, 164 were returned. Twenty-four respondents indicated that they did not have the knowledge or current experience of the HRD field to respond adequately to the survey items. Thus, of the 164 returned surveys, 137 were usable. Of the 137, 117 contained responses for both graduate and undergraduate courses; 17 contained responses for graduate courses only; and 7 contained responses for undergraduate courses only.

Findings

Based on responses from the 1997 survey, the competencies for trainers that were defined in 1989 are considered even more important than in 1991, yet many of them are perceived as less than adequately covered in both graduate and undergraduate studies. Skills that have increased significantly in perceived importance since the 1991 study are the technical skills of research and electronic-systems and the intellectual skill of visioning.

Table 1 provides a listing of all competencies included in the study. Twenty-three of the 25 competencies were ranked as important (□ 3.0) in the 1997 study. Of the 23 competencies perceived as important, 17 skills were also perceived as not adequately covered in course work (< 3.0): adult learning understanding, career development theories and techniques understanding, competency identification skill, computer competence, electronic-systems skill, evaluation skill, media selection skill, training and development theories and techniques understanding, research skill, organization behavior understanding, organization development theories and techniques, coaching skill, feedback skill, negotiation skill, relationship-building skill, data-reduction skill, and visioning skill. This figure of 17 competencies considered important but not adequately covered compares to the 1991 study figure of 13 competencies that were considered important but not adequately covered.

Table 1.
Importance of Competency and Extent of Coverage as Perceived by Both 1991 and 1997 Respondents

Competency	Importance of Competency		Extent of Coverage	
	1991 Mean and Standard Deviation (n=25)	1997 Mean and Standard Deviation (n=137)	1991 Mean and Standard Deviation (n=25)	1997 Mean and Standard Deviation (n=137)
Writing skill *	3.69	3.74	3.01	3.07
	.54	.55	.65	.90
Presentation skill *	3.76	3.65	3.60	3.13
	.42	.70	.49	.96
Computer competence	3.55	3.61	2.82	2.75
	.55	.73	.81	.97
Objectives preparation skill *	3.75	3.53	3.61	3.19
	.43	.75	.56	.95
Information-search skill *	3.40	3.51	2.85	3.00
	.70	.68	.71	.80
Group-process skill *	3.53	3.50	2.91	2.86
	.60	.65	.84	.93
Questioning skill *	3.61	3.50	3.24	2.84
	.59	.65	.75	.89
Feedback skill	3.54	3.45	3.04	2.78
	.55	.68	.72	.89
Adult-learning understanding	3.29	3.43	2.52	2.70
	.71	.78	.77	.98
Relationship-building skill	3.53	3.43	2.94	2.64
	.64	.68	.94	.93
Evaluation skill	3.52	3.42	2.85	2.74
	.64	.72	.74	.90
Visioning skill	3.12	3.36	2.25	2.37
	.79	.70	.73	.86
Data reduction skill	3.16	3.31	2.45	2.57
	.72	.77	.70	.83
Coaching skill	3.41	3.31	2.89	2.56
	.64	.80	.85	.98
Media selection skill	3.37	3.28	3.08	2.76
	.58	.73	.69	.84
Competency identification skill	3.50	3.24	3.04	2.80
	.72	.89	.81	.99
Research skill	2.75	3.19	2.32	2.79
	.80	.70	.87	.71
Negotiation skill	2.95	3.18	2.09	2.18
	.80	.90	.79	.96
Organization behavior	3.06	3.17	2.36	2.49
	.84	.88	.91	.99
Career development theories and technical understanding	3.04	3.13	2.36	2.41
	.62	.83	.67	.96
Training and development theories and techniques understanding	3.22	3.12	2.66	2.72
	.78	.97	.93	1.03

Competency	Importance of Competency		Extent of Coverage	
	1991 Mean and Standard Deviation (n=25)	1997 Mean and Standard Deviation (n=137)	1991 Mean and Standard Deviation (n=25)	1997 Mean and Standard Deviation (n=137)
Electronic-systems skill	2.78	3.10	2.02	2.31
	.82	.95	.80	.95
Organization development theories and techniques	2.79	3.03	2.22	2.41
	.86	.87	.86	.94
Budget and resource management skill	3.02	2.93	2.16	2.09
	.84	.90	.82	.84
Business understanding	2.91	2.87	2.31	2.25
	.89	.91	.89	.93

Notes: Competencies are listed in rank order by importance as perceived in the 1997 study.
An * indicates that the competency is considered adequately covered in course work.

On the basis of two-tailed t-tests, three competencies were perceived as significantly more important by participants in the 1997 study than by participants in the 1991 study. Importance ratings provided by the 1997 respondents were significantly higher for the technical competencies of research skill and electronic-systems skill and the intellectual competency of visioning skill than they were in 1991. Two other competencies were perceived as significantly less important than in the 1991 survey. They are competency identification skill and objectives preparation skill, both of which are technical competencies.

The 1997 respondents indicated a significant difference in their perception of the extent of coverage as it relates to several competencies. Coaching skill, questioning skill, and objectives preparation skill were all considered adequately covered now, though each was perceived as being covered to a significantly greater extent in 1991. The media selection skill, also significantly different, was considered adequately covered in 1991 but was not considered adequately covered in 1997. Other skills considered significantly different in extent of coverage by the two samples but not adequately covered in either 1991 or 1997 are electronic-systems skill, research skill, feedback skill, and presentation skill.

The responses for the 1997 study were also examined to compare the perceived importance of a competency for undergraduate studies and graduate studies and to compare the perceived extent of coverage for undergraduate studies and graduate studies. T -tests were run to determine the means of the paired samples. The competencies that were not considered significantly different as to importance were: competency identification skill, media selection skill, objectives preparation skill, and presentation skill. The perception of the importance of all other competencies was significantly different for graduate and undergraduate studies, with importance within graduate studies being perceived as more important in every case. The competencies that were not considered significantly different as to extent of coverage were: computer competence, media selection skill, objectives preparation skill, and presentation skill. The perception of the extent of coverage of all other competencies was significantly different for graduate and undergraduate studies, with graduate studies being indicated as having greater coverage in every case.

The responses for graduate course work indicate that all competencies are important. The responses for undergraduate course work indicate that competencies not perceived as important include: research skill, organization-development theories and techniques, organization behavior understanding, budget and resource management skill, and business understanding. The responses for graduate course work indicate that competencies perceived as important but not adequately covered include: career development theories and techniques understanding, electronic-systems skill, budget and resource management skill, business understanding, organization behavior understanding, organization-development theories and techniques, coaching skill, negotiation skill, and visioning skill. The responses for undergraduate course work indicate that competencies perceived as important but not adequately covered include:

adult-learning understanding, competency identification skill, electronic-systems skill, evaluation skill, training and development theories and techniques understanding, coaching skill, feedback skill, group-process skill, negotiation skill, relationship-building skill, data-reduction skill, information-search skill, and visioning skill.

Implications and Recommendations

Although faculty in UCVE institutions consider the field of HRD important and consider the competencies valid, many respondents appear to be uncertain of exactly what their role and/or responsibility should be in integrating the teaching of these skills into their particular courses. In some cases, leadership appears to be needed to assist educators in sorting out their role in the development of competencies for HRD practitioners.

Despite the status of the development of the human resources field, results from this study suggest that the competencies are still an appropriate basis for HRD curriculum. In fact, an even greater number of the competencies were rated as important in 1997 than in 1991. The limitation of the findings is that perceptions of only the academic community were solicited for this study. A broader range of participation, including representatives from the business community, might have provided different results regarding importance of the competencies.

The implications for educational institutions and faculty involved in preparing HRD professionals are nonetheless significant. The continuing evolution of the HRD field and the evolving responsibilities and roles of HRD professionals demand that appropriateness of academic preparation be continuously assessed. Educational personnel need to be a part of creative dialogue that addresses what should be taught and why. Educators must work with others who prepare and hire HRD professionals to ensure that academic programs are effective. The competencies included in the preparation of HRD personnel must be aligned with traditional and emerging roles of HRD professionals.

Because the following skills are currently considered important but less than adequately covered in course work, changes in preparing trainers should focus on at least enhancing the following competencies: Adult- learning understanding, Career development theories and techniques understanding, Competency identification skill, Computer competence, Electronic-systems skill, Evaluation skill, Media selection skill, Training and development theories and techniques understanding, Research skill, Organization behavior understanding, Organization development theories and techniques, Coaching skill, Feedback skill, Negotiation skill, Relationship-building skill, Data-reduction skill, and Visioning skill.

In addition, course work for graduate studies should give more attention to the cluster of business competencies, which includes budget and resource management skill, business understanding, organization behavior understanding, and organization development theories and techniques. According to the 1997 survey results, course work for undergraduate students should give more attention to technical competencies, interpersonal competencies, and intellectual competencies and should focus less on business competencies.

In light of both the review of literature and the survey results, many competencies are interrelated and important in preparing trainers to work in the current global environment. Graduate courses should focus more on business competencies, and course work at all levels should also address cross-cultural competencies. As part of preparing trainers, internships in business and industry could be required to help meet the need for bridging the gap between theory and practice. Particularly in graduate programs where more business competencies are being called for, these internships could prove to be beneficial learning experiences.

Because perceptions of the importance of the competencies has not diminished, but rather increased, future studies could focus on several considerations:

1. A new model for competencies of trainers to meet the needs of the more global work place could potentially be designed by building on the 1989 Models for HRD Practice and integrating the variety of competencies discussed during the past few years as pertinent to providing training in cross-cultural settings.

2. Further research could be conducted to examine competencies appropriate for study by undergraduate HRD students and by graduate HRD students, and more structured curricula could be developed to support the development of these competencies.
3. If it remains the accepted practice to focus on specific competencies of trainers rather than on more broad-based skills, then certification of competencies, which is based on more highly structured and more widely accepted course work, could be considered as an option for enhancing the level of expertise in the field of training.

References

Argyris, C. (1994, May). The future of workplace learning and performance. Training and Development, 48(5), pp. 36-47.

Baylen, D. M., Bailey, M. L., & Samardzija, M. (1996). Revisiting perceptions of HRD roles: Implications for HRD curricula. ASTD Annual Conference Proceedings.

Carnevale, A. P., & Stone, S. C. (1995). The American mosaic: An in-depth report on the future of diversity at work. New York, NY: McGraw-Hill, Inc.

Hodkinson, P. (1994). Alternative models of competence in vocational education and training. In A collection of readings related to competency -based training. EAE604 curriculum and competencies (pp. 310-318). Victoria, Australia: Victorian Education Foundation. (Eric Document Reproduction Number ED 384 695)

Holton, III, E. F., & Trott, Jr., J. W. (1996, Spring). Trends toward a closer integration of vocational education and human resource development. Journal of Vocational and Technical Education, 12(2), pp. 49-57.

Industry report 1997. (1997, October). Training, 34(10), pp. 36-79.

International Board of Standards for Training, Performance, and Instruction. (1988). Instructor competencies: The standards, 1. Author.

Kaeter, M. (1995, November). HRD degrees: Who needs them? Training, 32(11), pp. 65-74.

Leach, J. A. (1993). Preparing tomorrow's business and industry trainers: Appropriateness of the content of vocational teacher education programs. Journal of Vocational and Technical Education, 9(2), pp. 4-16.

Lynch, R. L., & Cross, K. F. (1995). Measure up! Yardsticks for continuous improvement. Cambridge, MA: Blackwell Business.

Mager, R. F. (1996, June). Morphing into a 21st century trainer. Training, 33(6), pp. 47-54.

Manz, C. C., & Sims, Jr., H. P. (1995). Businesses without bosses: How self-managing teams are building high-performance companies. New York, NY: John Wiley & Sons, Inc.

McLagan, P. A. (Ed.). (1983). Models for excellence: The conclusions and recommendations of the ASTD training and development competency study. Washington, D.C.: American Society for Training and Development.

McLagan, P. A. (1989). Models for HRD practice. Training and Development Journal, 43(9), 49-59.

Murnane, R. J., & Levy, F. (1996). Teaching the new basic skills: Principles for educating children to thrive in a changing economy. New York, NY: The Free Press.

Marquardt, M. J., & Engel, D. W. (1993, May). HRD competencies for a shrinking world. Training and Development, 47(5), pp. 59-60, 62-65.

Olson, S. J. (1994, Fall). Competencies of two-year college technical instructors and technical trainers: Similarities and differences. Journal of Industrial Teacher Education, 32(1), pp. 65-85.

Rhinesmith, S. (1994, May). Trends that will influence workplace learning and performance in the next five years. Training and Development, 48(5), pp. 29-32.

Rifkin, J. (1995). The end of work: The decline of the global labor force and the dawn of the post-market era. New York, NY: G. P. Putnam's Sons.

Robinson, D. G., & Robinson, J. C. (1995). Performance consulting: Moving beyond training. San Francisco, CA: Berrett-Koehler Publishers.

Tobin, D. R. (1996). Transformational learning: Renewing your company through knowledge and skills. New York, NY: John Wiley & Sons, Inc.

Using an On-line Focus Group to Identify Research Issues in Distance Educator/Trainer Development

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A series of on-line focus groups was conducted to explore issues related to the training and development of distance educators/trainers. Ten distance educators participated in the focus groups, which used a web-based asynchronous communication tool. Emerging themes were identified which addressed issues related to defining a.) key characteristics and skills of the distance educator/trainer, b.) successful training and development activities and support services, and c.) barriers to successful development. Recommendations are made for further research in establishing development programs for distance educators, and the strengths and limitations of on-line focus groups as a research method are discussed.

Faculty training is critical to the success of any distance education program. In fact, designing, creating, and implementing effective in-service training is touted by some as the most efficient pathway to the long-term success of distance education (Willis, 1994). Effective distance training requires the right mix of instructional design, skilled distance trainers, and reliable delivery systems (Sheridan, 1996). However, the predominance of research in distance education has been devoted to studying delivery systems, design methods, and patterns of interaction (Threlkeld & Brzoska, 1994). Little research has been done on the development of the distance educator/trainer. This study explores emergent research questions related to the training and development of educators/trainers in distance training programs.

Further, the use of on-line focus groups for distance education research needs to be explored as a viable qualitative research method. Murray (1997) indicates that "methods of off-line focus groups can be adapted for virtual groups. The use of VFGs has provided valuable research data that could not have been readily obtained using other methods and from participants whom I could not have otherwise hoped to gather together for discussions without considerable expense" (p. 548). This study will evaluate the strengths and limitations of on-line focus groups for qualitative distance education research.

Research Questions

The following research questions, therefore, guided this study:

1: What are the issues related to developing effective distance educators/trainers?

2: What are the advantages and limitations of an on-line focus group for research in distance education?

Methods

Since the purpose of the research was to identify and explore emerging themes related to issues in the development of distance educators/trainers, the research method chosen was qualitative in design, with the primary collection method being focus groups. Typically, a focus group explores specific topics with groups of 6 to 8 people over a period of specified time (Patton, 1990).

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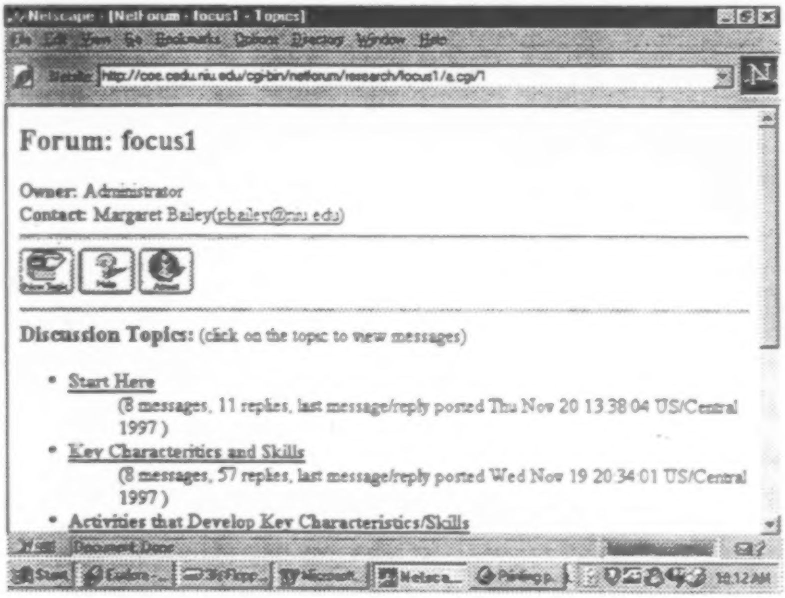
"Within qualitative research, focus groups have particular strength for gathering the breadth and depth of participants' opinions on issues specified by the researcher" (Murray, 1997, p. 542). An on-line focus group was selected since a diverse sample could be achieved by bringing members together from a variety of environments and locations through the connectivity of the World-Wide-Web. A face-to-face focus group was not feasible given time and resource constraints.

Pilot of Asynchronous Communication Tool. A pilot group using NetForum™ web-based discussion software was held the week of September 29, 1997 with a group of students enrolled in a distance education course at a midwestern university. The purpose of the pilot was to test the viability of an asynchronous communication tool as a vehicle for conducting focus groups, and to uncover technological and process issues. The software needed to support multiple users, be accessed easily on a website, support substantive discussion, and capture the discussion for future analysis. The pilot established a two-hour timeframe for discussion. Participants had no problems with accessing the tool from a variety of home platforms (MAC and PC) and with a variety of internet service providers. The only issue had to do with some services being slow, and others having a time-out feature that would dump subscribers who were inactive for a period of time. The tool in the pilot supported all of the required conditions and was selected for the full study.

On-line focus groups. Two on-line focus groups were scheduled, one in November and another in December, 1997. Participants accessed the focus groups through a website (http://coe.cedu.niu.edu/~bailey/research/index.htm). Focus questions and ground rules were posted on the website in advance of discussion. Focus groups were held exclusively in NetForum threaded discussion areas established for each focus group. (See Figure 1.) Each focus group was initiated with a four-hour "kick-off" session with the researchers on-line to address comments, questions, and facilitate discussion. The kick-offs were followed by seven days of asynchronous dialog. E-mail reminders were sent to research participants every 2-3 days reminding them to log-on and participate.


Netscape - [NetForum - focus1 - Topics]
http://coe.cedu.niu.edu/cgi-bin/netforum/research/focus1/a.cgi/1
Document: Done
10:12 AM

Forum: focus1

Owner: Administrator
Contact: Margaret Bailey(pbailey@niu.edu)

Discussion Topics: (click on the topic to view messages)

- Start Here
  (8 messages, 11 replies, last message/reply posted Thu Nov 20 13:38:04 US/Central 1997)
- Key Characteritics and Skills
  (8 messages, 57 replies, last message/reply posted Wed Nov 19 20:34:01 US/Central 1997)
- Activities that Develop Key Characteristics/Skills

Figure 1: NetForum™ Asynchronous Communication Tool.

Participants. Research participants were 10 practitioners with a stake in distance educator/trainer development to represent a mix of perspectives. The sample was purposeful, and members were invited based on research goals to establish a diverse sample of the following roles: instructional designer, distance education program administrator, distance education

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support service provider, distance trainer/educator, and distance learner. The final sample represented a mix of individuals currently active in distance education programs in academic and corporate settings, primarily from the states of Illinois and Florida. The same participants were invited to participate in both the November and December focus groups. The researchers acted as participant observers during both focus groups. A profile of each participant is provided below:

1. Andrew is a distance educator. He has taught in videoconferencing and just recently in web-based instruction.
2. Beth is an instructional designer of distance education programs. She primarily supports educators in the design of web-based instruction.
3. Cathy is a program administrator (coordinator of distance education programs). She works directly with distance educators to assist in their training and skill development.
4. David is a director of support services (distance education delivery systems). He supports distance educators in their technology and equipment needs.
5. Edward is an instructional designer of distance education programs. He supports educators in the design of both videoconferencing and web-based programs.
6. Fran is a distance educator. She has taught in videoconferencing and has recently organized a peer group for distance educators.
7. Gina is an instructional designer. She works with a team of designers to support trainers in the design of web-based and print instruction. She recently completed a course as a distance learner.
8. Helen is a program administrator (coordinator of distance education programs). She designs and delivers orientation sessions for new distance educators.
9. Joy is a program administrator (coordinator of distance education programs). She supports a professional organization with a wide range of distance education programs. She has completed several courses as a distance learner.
10. Kathleen is a distance educator and has taught courses in videoconferencing supported by web communication tools.

Analysis. The first focus group was held in November, 1997 and established a first level response to three focus questions (see Table 1). After a week of asynchronous dialog, and before the December, 1997 focus group, the researchers analyzed responses for emerging themes and constructed follow-up focus questions based on those themes (see Table 2). The questions became the group's focus questions in December. After the final week of dialog, the researchers analyzed responses for themes. Final themes, and recommendations for research, are presented in this paper.

A capstone question was posed to allow participants to evaluate and reflect on the on-line focus group experience. Responses, copuled with researcher observations and analysis of interaction patterns, provide a discussion of strengths and limitations of the on-line focus group research method to address research question two.

Themes from Focus Group One

All responses (n=83) from Focus Group One were analyzed for themes. Themes were categorized in relationship to each focus question (see Table 1). A discussion of each focus question follows below.

What are the key characteristics and skills expected of the distance educator/trainer? This question generated the most number of responses (n=65). Five themes emerged in response to the question. Participants felt that the key categories of skills included a.) knowledge of distance learning issues, b.) equipment utilization skills, c.) pedagogical skills, and d.) interpersonal skills. Participants chose to distinguish characteristics from skills. Participants defined several "ideal characteristics" early including patience, flexibility, enthusiasm, discipline, and optimism. The theme that prevailed, however, was that all of these represent a positive disposition toward distance learning and a willingness to pioneer new methods and technologies.

Responses for knowledge of distance learning and equipment utilization were at a sufficient level of detail and included specific skills for camera movement, computer skills, troubleshooting, knowledge of types of interaction in distance learning environments, and typical distance communication tools. Researchers had hoped for more specific responses related to pedagogy, thus developed follow-up questions for Focus Group Two (see Table 2).

Table 1. Summary of Focus Group One Questions and Themes

Focus Question	*Emerging Themes/Categories*
1-1. What are the key characteristics and skills expected of the distance educator/trainer?	a. Knowledge of distance learning issues. b. Equipment utilization skills. c. Pedagogical skills. d. Interpersonal skills. e. Pioneer attitude and disposition towards distance learning.
1-2. What are successful activities that facilitate the development of the key characteristics and skills in distance educator/trainers?	a. Those with experience should train others. b. Successful train-the-trainer strategies are creative and varied. c. Non-training performance support is overlooked.
1-3. What are the organizational and individual barriers to successful distance educator/trainer development?	a. Organizational barriers can be extensive. b. The myth of easy migration.

What are successful activitites that facilitate the development of the key characteristics and skills in distance educator/trainers? A number of responses (n=18) focused on three themes: a.) experienced distance educators should train others, b.) a variety of train-the-trainer and orientation strategies can meet the needs of distance educator/trainers, and c.) support of distance educators should address more than formal training. Responses suggested that experience with both the technology and distance training are essential for the expert train-the-trainer. Train-the-trainer programs should include hands-on experience, authentic situations, use a constructivist approach, and include multiple opportunities for practice. Alternatives to formal training and orientation were suggested including apprenticeship programs, educator teams, and mentoring programs. Performance support needs and services were hinted at in a number of responses. This prompted a follow-up question in Focus Group Two (see Table 2).

What are the organizational and individual barriers to successful educator/trainer development? This question drew few initial responses (n=6) with most of the responses focusing on organizational barriers to include lack of release time, lack of awareness or commitment, and lack of resources (staff, equipment, support services). An interesting discussion on individual barriers noted the "myth of easy migration" as a barrier to effective development. Primarily, this myth promotes the notion among educators and administrators that distance training poses no new competencies beyond traditional face-to-face instruction. This prompted a follow-up question regarding additional individual barriers in Focus Group Two (see Table 2).

Themes from Focus Group Two

All responses (n-58) from Focus Group Two were analyzed for themes. Themes were categorized in relationship to each of five deeper focus questions (see Table 2). A discussion of each focus question follows the table.

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Table 2. Summary of Focus Group Two Questions and Themes

Focus Question	*Themes*	*Links to*
2-1. What personal obstacles, handicaps, or deficits must new distance educators/ trainers overcome to be successful?	a. Establish new perceptions. b. Overcome fears. c. Relinquish control. d. Establish reasonable expectations.	1-3b
2-2. What are the support needs of the new distance educator/trainer? What types of support services and activities are effective?	a. Technology support. b. Mentoring. c. Release time. d. Curriculum and media design. e. Adminstrative support.	1-2c
2-3. What pedagogical skills are required of the distance educator/trainer new to delivering courses via video-conferencing?	a. Lead activities for relationship building. b. Establish student ownership of learning. c. Engage learners. d. Use variety of instructional methods. e. Use effective classroom management. f. Establish team for design and technical support of teaching.	1-1c
2-4. What pedagogical skills are required of the distance educator/trainer new to delivering courses on-line (e.g., web-based instruction)?	a. Facilitation. b. Guide self-paced learning. c. Counsel and advise students. d. Provide access to easy to use tools and resources. e. Communicate without visual/verbal cues. f. Systems view.	1-1c
2-5. What are your personal recommendations to the distance educator/trainer facing migration from face-to-face delivery to distance delivery?	a. Be proactive. b. Find a support group. c. Tap into experience. d. Be a distance learner. e. Be prepared. f. Engage in DE research.	1-1e 1-3b

What personal obstacles, handicaps, or deficits must new distance educators/trainers overcome to be successful? This question was chosen to facilitate elaborated responses to Focus Group One question 1-3, theme b. Responses (n=14) focused on internal attitudinal barriers that inhibit development and revealed four central themes: a.) a need to develop new definitions of "classroom," "training," and "learning," b.) fears, c.) resistance to relinquishing direct control over learners and the environment, and d.) anticipation of negative expectations and evaluations from students and peers. While the final theme links strongly to organizational barriers identified in Focus Group One, the prevailing theme here was on the internal fear of not being able to please all learners in this environment. Fears were discussed the most, and included fear of failure and making mistakes, self-consciousness (on camera), and fear of asking for help or revealing gaps in knowledge or expertise. Discussion did not move into identifying strategies for overcoming barriers.

What are the support needs of the new distance educator/trainer? What types of support services and activities are effective? This question was chosen to facilitate elaborated responses to Focus Group One question 1-2, theme c. Responses (n=10) quickly identified five categories of support needs: a.) technology, b.) mentoring, c.) release time (staffing), d.) curriculum and media design, and e.) administrative support. There was debate surrounding whether curriculum and media design should be support services, or whether these are expected roles and skills of the distance educator/trainer. The suggested activities that generated the most affirmation were informal performance support programs such as peer mentoring and support groups.

What pedagogical skills are required of the distance educator/trainer new to delivering courses via video-conferencing? This question was chosen to facilitate elaborated responses to Focus Group One question 1-1, theme c. and attempted to establish specific categories of pedagogy for videoconferencing. Responses (n=16) began with building consensus on a definition of pedagogy which is best represented in the following contribution by Beth:

> "How to teach" is the most important part of pedagogy and that is the science of teaching, which, in most cases, can be prescribed and can provide us with definite rules and principles for teaching...On the other hand, pedagogy also includes the "art of teaching"...I guess my point is when we are discussing pedagogy, it is good to keep in mind that we are talking about both science and art.

Participants felt distance educators/trainers should be able to successfully accomplish the following as part of their instruction: a.) lead activities for relationship building (such as icebreakers and teambuilding exercises), b.) establish student ownership of learning, c.) engage learners, d.) use a variety of instructional methods (e.g., lecturette, small group activities, discussion, pair work), e.) use effective classroom management (particularly for remote site students), and f.) seek out a skilled team for design and technical support of teaching. The prevailing theme for the final point about teams centered around preparation of instructional materials, with most agreeing that good design and preparation enables effective instruction.

What pedagogical skills are required of the distance educator/trainer new to delivering courses on-line (web-based instruction)? This question was chosen to facilitate elaborated responses to Focus Group One question 1-1, theme c. and attempted to establish specific categories of pedagogy for on-line distance training. Responses (n=8) indicated that the skilled web-based trainer should be able to accomplish the following in instruction: a.) facilitation, b.) guide self-paced learning, c.) counsel and advise students, d.) provide access to easy to use tools and resources, e.) communicate without verbal/visual cues, and f.) maintain a systems (rather than events) view of the instruction. An interesting underlying assumption in this discussion was that the web-based trainer needs skills to both develop and facilitate on-line instruction. In addition, participants had difficulty arriving at specific strategies and prescriptions, particularly for guiding students and establishing effective peer communication.

What are your personal recommendations to the distance educator/trainer facing migration from face-to-face delivery to distance delivery? This question was chosen to facilitate elaborated responses to Focus Group One question 1-1. Responses (n=10) tended to reiterate prior discussion in prescriptive form. Participants indicated six top priorities for the new distance educator/trainer: a.) be proactive, b.) find a support group, c.) tap into experience, d.) be a distance learner, e.) be prepared, and f.) engage in DE research. The response that drew the most affirmation was for the distance educator/trainer to directly experience instruction as a distance learner.

Final Themes and Recommendations for Research

Skills can be defined for the distance educator/trainer. Participants were able to identify several skills for the distance educator/trainer. The resulting broad categories of skills from Focus Group One, and the detailed pedagogical skills of Focus Group Two, serve as an emerging framework for future competency studies. Participants found it useful to distinguish pedagogical skills for videoconferencing and web-based training. Further research is required to confirm the necessity of this distinction, and to exhaust a list of competencies in these areas.

Distance education involves both science and art. An underlying theme of responses in this study suggests that development programs for distance educators/trainers should address both the science and art of teaching in these environments. Technical skills and rules of teaching can be systematically explored in competency studies and quantitative research designs. However, qualitative research methods are needed to explore the "art" of distance education and possible distinguishing success factors in such areas as "disposition" and "pioneering."

Both formal training activities and informal performance support activities should be explored for distance educator/trainers. A recurring theme prevailed in support of informal development and performance support activities for the distance educator/trainer. Research into the feasibility and effectiveness of informal activities such as mentoring and support groups is required.

Both organizational and individual barriers exist to successful distance educator/trainer development, and these barriers should be confronted in distance trainer development programs. Clearly, participants felt that no development program for distance educators/trainers can ignore the "baggage" brought by new distance educators and imposed, intentionally or not, by organizations. Research is required which confirms the external and internal barriers revealed here, and explores successful strategies that allow individuals to overcome the barriers to achieve success in distance education.

Advantages and Limitations of On-line Focus Groups for Research

Advantages of an on-line focus group for research. The on-line focus group method used in this study was able to accomplish the goals of the research project, and provided a sufficient number of thoughtful responses ($n=141$) for analysis. One of the greatest advantages noted by a participant was the asynchronous nature of the focus group which provided the ability to answer a question when *she* was ready, not when the agenda might dictate. As expected, participants progressively built on each others' responses as the study progressed, and as relationships formed. In fact, initial interaction analysis shows that Focus Group Two participant-participant interaction nearly doubled over Focus Group One. An advantage to the validity of the research, the method allowed for participation from some individuals that otherwise would not have contributed given schedules and distance. Diversity of the audience is the critical factor in focus groups, and the on-line focus group clearly has an advantage over face-to-face in this regard. Although not a part of this study, the possibility exists to run several on-line focus groups in the same timeframe, achieving reliability as well as validity of responses. Finally, since the tool used in the study keeps a historical text record of all responses, extensive text analysis for themes was possible.

Limitations of an on-line focus group for research. The greatest limitation of the on-line focus group over a face-to-face group was the extended timeframe required to conduct the study. Face-to-face groups can typically be accomplished in a half or full-day. This complete study was conducted over a four-week period, which was necessary due to the asynchronous nature of the tool and the need to develop deeper focus questions for follow-up. In fact, the timeframe of the study could have been extended further to achieve more depth and specificity, and to reach peaks in creativity and accelerated idea-building. Murray (1997) suggests that researchers pose flexible timeframes, calling discussion to a close when the responses dictate, not when the calendar does. Another disadvantage is attrition of participants and lack of participation. It is much easier to keep an audience captive in a room, whereas participation on-line required instrinsic motivation and commitment outside of the control of the researcher. This study experienced attrition of three members from Focus Group One to Focus Group Two, and a small drop in total responses between groups (from 83 to 58).

Recommendations for conducting an on-line focus group. Most face-to-face facilitation skills for conducting focus groups transfer well to on-line environments. Using open-ended questions, summarizing and clarifying responses, and encouraging elaboration are all possible in text-based communication. In planning an on-line focus group, we found that posting ground rules and a simple structure for questions were essential components for getting started. (See http://coe.cedu.niu.edu/~bailey/research/index.htm for examples.) We also found that groups of 6-8 appear to be the minimum group size with this method. Ten participants worked well; however, between 10 and 15 would have accomplished more interaction and would have addressed attrition. Murray (1997) concurs, adding however that "group size alone is not necessarily the predictor of levels of contribution and interaction." Other factors such as motivation, perceived benefits, interest, and the nature of the question are also significant predictors of levels of participation.

Overall, the on-line focus group was an appropriate and useful method for this study. Further replications of the method should be conducted to further develop strategies for handling attrition, leading deep and meaninful discussion, and encouraging participation.

References

About NetForum™. (1997). Homepage located at http://www.medsch.wisc.edu/netforum/.
Murray, P. (1997). Using virtual focus groups in qualitative research. *Qualitative Health Research.* 7(4). pp. 542-549.

Patton, M. (1990). Qualitative evaluation and research methods (2nd ed.). Newbury Park, CA: Sage.

Sheridan, D. (1996). Can adults learn at a distance? And how well? Training. 33(11). November, 1996. pp. S12(8).

Threlkeld, R. & Brzoska, K. (1994). Research in distance education. In Willis, B. (Ed.) Distance education strategies and tools. Englewood Cliffs, New Jersey: Educational Technology Publications.

Willis, B. (1994). Enhancing faculty effectiveness in distance education. In Willis, B. (Ed.) Distance education strategies and tools. Englewood Cliffs, New Jersey: Educational Technology Publications.

Case Study and Its Virtuoso Possibilities

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A major advantage of case study is that its creative and investigative possibilities have not been neo-positivistically bounded by exclusionary criteria, and it is still possible to combine honored traditions of inquiry that come from the arts and sciences as well as from the newer social science literatures. The HRD world is full of cases simply begging to be studied, and the ways we study these are limited only by our willingness to use our virtuosity as scholars, to find best possible explanations for what we hear, observe, read, and intuit –in context–about the phenomena of interest to us as researchers and of concern to other stakeholders.

There is no lack of agreement among scholars that research worth doing must contribute to knowledge, be meaningful to potential users, and have implications for changing the world we live in, in some constructive way. What is far more difficult for us to agree upon is how research methods are legitimized. This is by no means a trivial matter, and in recent years that have shaken our faith in cumulative science, we are increasingly unwilling to wait for the weight of incremental quantitative evidence to inform decisions that need to be made "yesterday."

It may be that quantitative research has run afoul of its own exclusive claims to scientific legitimacy, and as a result, can tell us far less than we need to know. Now it is troubling that many who have taken up the flag for qualitative research have also fallen into the habit of narrowly prescribing what it takes to do "scientific" qualitative study. For example, scholars like Schwartz & Jacobs (1979) and Van Maanen, Dabbs, & Faulkner (1982) endorsed two conditions which, if present, would enable us to judge whether a piece of research is legitimately "qualitative": 1) the detailed, close-up observation of the natural world by the investigator, and 2) the attempt to avoid prior commitment to any theoretical model. These are clearly exclusionary criteria, built on the assumption that qualitative means only "ethnomethodological" and limiting by such rule-making what the qualitative researcher should attempt to do. But as Silverman (1993) has said, "Qualitative research can cover a vast range of research styles and can even be co-opted back into the positivist tradition " (p. 23). There seems to be a danger that once again, the codification of a particular way of looking at research can be blinding, ruling out legitimate inquiry that does not quite fit the rule-like conventions that are developing. It is like telling a musician that a composition is to be played one way, and one way only, when in fact, it can and should be interpreted by the performing virtuoso according to his own technical skill, mental set, emotional sensitivity, and rigorous re-evaluation of each musical element.

We are slowly coming around to the persuasion that research is an art, as much as it is a scientific enterprise (Sandelowski, 1994). It is a performing art, and it does not pretend to be the perceived reality or multiple realities it is trying to explain. There is art that has integrity (i.e., it is holistic and both intellectually and emotionally unpretentious), and there is art that does not. There is science that has integrity, and science that does not. It is not the presence or absence of practice conventions or "rules" that make all the difference, but rather the artist's or the scientist's knowledge, intention and conscientiousness in performing either art and science--and often a combination of the two-- as well and as honestly as they possibly can.

It is integrity , as defined above, that fundamentally grounds the issues of reliability and validity-- and not whether specific rules have been adhered to. It is liberating to understand that there are different ways to perform science with integrity. Different terms may be used to describe similarities in the way we go about safeguarding that integrity , but these terms have their own shades of meaning depending on the research situations involved. This does not mean that "anything

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goes," as critics sometimes charge, but it does mean that legitimate modes of inquiry are more various than we have often been led to believe. It also means that staking claims to integrity (producing our final reports) necessarily takes different forms, depending on what we are trying to learn, and why.

It is simpler and probably closer to the lived experience of researchers and reviewers to view qualitative research as merely widening the stream of inquiry; pushing out the boundaries of quantifiable (i.e., numerical) data gathering and interpretation to admit the legitimacy of text, oral, and observational data and analysis. It has already become intellectually mainstream. As we strive for understanding, and interpretation of *all* the available data (not just some of it) the use of non-quantitative data has come into its own as a powerful and amplifying research strategy. It helps to insure that anomalous data, which is often the most instructive, is not ignored.

Case study does not "fit the rules" if we try to place to it into either quantitative or qualitative "camps." For example, neither of the two conditions stated above (naturalistic observation and deliberate avoidance of commitment to prior theory) necessarily obtains for the case study. It is equally true that, while case studies can be built on the mathematical symbolism called "quantitative data" alone, such a standard also fails to define the case study. Qualitative case study researchers believe that their work shares many of the same root metaphors as other forms of qualitative inquiry, but they do not feel confined to interactionist, ethnomethodological, or naturalistic forms of inquiry. Even their use of textual analysis may owe as much to traditions in the literary, performing, and plastic arts (literary and sacred text analysis; music criticism; commentaries about "significance" in theater and art) as it does to linguistic structuring or cultural themes. Denzin and Lincoln (1994) concede that "In the blurred genres phase [of qualitative research development] the humanities became central resources for critical interpretive theory ." (p. 2). *Meaning,* the particular goal of those who seek to use holistic inquiry methods, has many sources and contingencies.

If it is true that the legitimacy of a method depends upon what the investigation is about *and* what the researcher, practicing in a familiar paradigm, understands to be rigorous inquiry, then what is troublesome about exclusionary criteria is they underrate the decisive role that individual preferences, perceptions, training, past experiences, and even location and timing, play in all research. Case study stands out as an investigative approach precisely because it bridges every sort of paradigm. For a particular purpose, it can be conducted solely by quantitative means. On the other hand, one need not ever leave the library and the biographical or historical archives to produce viable case study results that serve other purposes. Researchers choose to use case study for its explanatory power, but also for more personal reasons. Stake (1995) metaphorically describes the case study as giving access to a "a splendid palette" for inquiry. He adds,

> Finishing a case study is the consummation of a work of art. A few of us will find a case study...the finest work of our lifetime. Because it is an exercise in such depth, the study is an opportunity to see what others have not yet seen, to reflect the uniqueness of our own lives, to engage the best of our interpretive powers, and to make, even by its integrity alone, an advocacy for those things we cherish." (p. 136).

While not every researcher will do one case study that stands out above all others, there is that holistic and exciting possibility. There is also the paradigm-shifting possibility that so-called "thought pieces" such as the articles that wind up in the Forum section of the *HRDQ* may one day be recognized for what they are: case studies of how concepts are linked together in thought-provoking ways to generate new mental models. It is such conceptual modeling that is the research methodology selected for use in this paper. It is proposed that such modeling is particularly useful at the current stage of HRD research development.

It is perhaps our impoverished teaching of research strategies at the university level that makes the rigor of such textual and conceptual methods seem obscure or even illegitimate. The most telling argument for their use, however, is that streams of more traditional research and changes in professional practice tend to take their cues from conceptual modeling. A case in point is the *HRDQ* article called "The New Learning Organization: Should There Be a Chief Learning Officer in the House?" (Willis, 1991) which set off a new HRD practice trend and a series of articles on the new role of the CLO.

Defining "Case Study" and Deciding When To Use It

For the novice who is dealing with references to case study for the first time, Stake makes a cautionary distinction between 1) development and use of case studies for simulation and instructional purposes, and 2) case study as disciplined inquiry. It is the latter that needs further expression here.

Definers of case study seem largely to be comfortable with aligning method and purpose, and have avoided the "dismemberment" that leads to "methodolatry... the slavish devotion to method that so often overtakes discourse..." (Janesick, 1994). Stake, for example, has used case study largely for program evaluation purposes, but he speaks to the issue of using different approaches under different conditions. For him the case study is " a disciplined, qualitative mode of inquiry into the single case." It is not built on a shaky stack of generalities. Instead, it describes "a specific, complex, functioning thing," and the researcher is expected to "catch the complexity." The case study "emphasizes episodes of nuance, the sequentiality of happenings in context, the wholeness of the individual." The case itself is "an integrated system." (pp. xi-2).

Stake advocates organizing a study around issues and avoiding tactics that do not fit the individual researcher's style of operation or circumstances. He adopts Smith's notion (1994) that a case is "a bounded system," having a boundary and working parts. Stake continues to use concepts and terms from General Systems Theory (GST) throughout his discussion. A case may be bounded by virtue of being an organizational unit, or it may include parts or all of other systems in the environment as necessary to investigate the issue of interest. A case is a selected observation point, purposively chosen either for intrinsic interest or for its potential capacity to illustrate what Hamel calls the "global in the local" (1993, p. v), through the power of what Yin calls "analytic generalization." (1989, p. 21). The "representativeness" of the case is not thought of in terms of statistical generalization but in terms of possibilities for theory extension.

Yin defines case study as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used." It is useful particularly when examining contemporary events "when the relevant behaviors cannot be manipulated." (pp. 19-23). Although he avowedly seeks to "disentangle" the case study as a research tool from the instructional case study, from "ethnographies and participant observation," and from "qualitative methods," insisting that "the essence of case study goes beyond *all* of these," his definition still does not seem to accommodate the library-researched case that he later insists falls into the genre. For him, case study is preferred when "how" or "why" questions are to be asked.

Yin finds five components of research design of primary importance: "1) a study's questions, 2) its propositions, if any, 3) its unit(s) of analysis, 4) the logic linking the data to the propositions, and 5) the criteria for interpreting the findings." He warns that the researcher should always be on the look-out for "rival theories" that might challenge interpretations and provide alternative explanations. The researcher selects a "unit of analysis" that is meaningful in terms of the research purpose. Essentially, he uses this term as a shorthand for picking the appropriate operational frame for the proposed study, whether it is a person, a group, an organization, or a less well defined "entity or event." (pp. 29-31).

Bogdan and Biklen (1992) broaden the definition beyond a single site, stating that case study is " a detailed examination of one setting, or one single subject, or one single depository of documents, or one particular event." (p. 58). They also discuss the relevance of comparative or multiple case study, involving conducting two or more with-in case studies and then finding patterns and drawing conclusions across cases by comparison and contrast.

Merriam (1988) defined a *qualitative case study* in terms of four of its properties: 1) the use of inductive reasoning, even though one may start with "working hypotheses," 2) the heuristic possibilities for generating new understanding in the reader, 3) "thick" description encompassing vast amounts of data, and 4) the particularistic nature of each case. She adds that descriptive data are used to "develop conceptual categories that illustrate, support, or challenge theoretical assumptions held prior to the data gathering." (p. 28). Morse (1994) similarly recognizes the value of theoretical perspective, to be used as a "conceptual template" with which one begins, but which one can expect to be altered as the data emerges. In contrast to the potentially misleading view that no "hypotheses" (i.e., beliefs) are allowable before data gathering in qualitative research, Merriam and Morse describe what is perhaps a plainer and more moderate view of how qualitative researchers really operate. We may initiate thinking by forming tentative (though not formal) hypotheses, even as we prepare to alter or erase these with new data. A new dictionary created for qualitative researchers (Schwandt, 1997) also has the potential for misleading those interested in broader understandings of how research occurs. Writing for qualitative researchers about qualitative case studies, he seems to subscribe to the common idea that studies using ethnomethodologies are the only kinds of qualitative case studies that can be done.

Case Study Typologies

There are a number of typologies in use. Stake speaks of the *intrinsic case study*, initiated because of the need to know about that particular case. Another type is the *instrumental case study*, which is a research means to a further (perhaps a policy-making) end. *Collective case study* may require coordination of investigation in different sites. Stake's three types may require the use of different strategies. Yin (and others) distinguish *exploratory case studies* from *case studies that test hypotheses*. Yin also speaks of *single case, multiple case, holistic* vs. *embedded case* studies, some of which may require more than one unit of analysis. Bogdan & Biklen mention the *observational* case study as a specific type.

Smith (1994) suggests that *life writing* is a useful type of inquiry for case study. It can involve a number of genres with such labels as " portrayals, portraits, profiles, memoirs, life stories, life histories, case studies, autobiographies, journals, diaries, and on and on -- and suggesting a slightly different perspective under consideration." He perceives that the intellectual problems involved in working with stories, as a mode of inquiry, "seem to demand more of creativity than of technical or rule-governed problem solving." (p. 187). The point he is making is that case studies are at once a separate genre within what contemporary researchers are calling "life writing" *and* a user of other life writing genres. This is yet another illustration of how much broader qualitative research is than most writers in the field seem to acknowledge. It is also a clear example of the way science, the humanities, and the arts seem to be converging toward a less segmental point of view.

Doing Case Study: Rewards and Pitfalls

Perhaps the most gratifying aspect of case study research is the expectation that no two cases will be alike, and that no two researchers will be likely to choose the same materials, approach the study with precisely the same world view, or use the same words to write a research report -- even if they worked from the same field notes. The researcher has an interpretive and perhaps a critical voice that is wanted and expected to be heard. There are aesthetics as well as conventional inquiry practices to be observed. The case study researcher is given license, after all, to turn in a virtuoso performance, making it as revealing and descriptively exciting (while sticking to the data) as possible. The purpose here in returning to the music metaphor is deliberately tonal, just as the "palette of colors" Stake finds in case study research is deliberately spectral, and Janesick's dance and choreography metaphor is deliberately evocative of rhythm, pattern, and emotion. All imply interpretive power, sensitivity to an audience, and performer individuality. The audience is expected to participate, overtly or privately, in the case study performance. Reason (1994) advances the thesis that human beings *co-create* their reality through participation, experience and action. Performers, then, are backed up by behind-the-scenes and in-the-audience ranks of co-creators, even when they are performing as soloists. This is entirely consistent with the qualitative research perspective that the reader participates in the meaning-making of any published research.

Case study stands on its own merits; it has a long and useful track record. When it is challenged for "truth value" such challenges are ill-conceived, for case study never pretends to have found "scientific truth." It collects evidence of multiple realities, particularly the realities of stakeholders, so that a new light can be shed on the phenomenon studied. In many ways it is an humble and "non-expert" enterprise, asking for insights that may be useful, not facts that must be acted on in prescriptive ways. Invoking systemic ways of thinking enables the case study researcher to operate conceptually on a meta-level. The meta-level treatment enables us to bypass the paradigmatic enclaves of interpretation that Denzin and Lincoln have so taxonomically described. (p. 13). Systems thinking is a powerful standpoint for researchers. It hinges on an epistemology of the whole, rather than epistemologies of the pieces. It is the epistemological separatism that made cross-cummunication in the disciplines so difficult, that General Systems Theory was designed to heal.

These are the attractions and rewards of case study research. It is time now to consider the pitfalls --most of which are common to research of all kinds. For example, all research is open to challenge on ideological or paradigmatic grounds, even if the research design, execution, and presentation are impeccable. Criteria irrelevant to the design will be invoked by critics because of their own research habits and beliefs, or even because of politics. "Interpretive truth" is in the eye of the beholder, the "meaning-maker." There are new ethical and epistemological criteria for evaluating research, so criticism may come from holders of these "stand-point" positions (Denzin & Lincoln, 1994, p. 101) as easily as from traditionalists of many colors. Not everyone will be willing to accept the substitution of "credibility, transferability, dependability, and confirmability" for "internal and external validity, reliability, and objectivity" as criteria for sound research --even if the case is made that objectivity is a human fiction and that, as Cronbach says, "Generalizations decay [and] the more open a system, the shorter the half-life of relations within it are likely to be." (1975, pp. 122, 123).

Case studies, like all research, may have unintended consequences. Causal relationships may be improperly inferred, even when the stakeholders themselves participate. Researchers may confine themselves to a particular methodological bias and miss essential data. They may be more interested in theory-building than in assisting the systems they study, and if so, this is likely to be discovered and resented. While accommodating multiple views may provide checks and balances, data management and analysis tend to be very demanding. Protections against self-delusion are not fool-proof, partly because there are no cook-book designs for examining data that keeps emerging and requiring design alterations. Each case design needs tailoring, and the rules change. As Pant has observed, "unfortunately, sets of rules rarely come with rules about how to look at themselves, how to look at the issue of rules..." (p. 293), and so we have to discipline ourselves to analyze our rules as well as our data.

A Good Case Study: What Does It Look Like?

A good case study tells you precisely what "unit of analysis" is being studied, why, and how you are approaching it. "A good proposal is an argument -- a fair and balanced one, but nevertheless an argument -- for the researcher's project....It must be written persuasively..." It also needs to be "clear, interesting to read, technically neat, professional in appearance" and have perceived social benefits stated. Cost benefits (if applicable) should also be stated. (Morse, 1994, pp. 226).

Researchers proceed then by every means at their disposal, to conduct the study honestly, realistically, and reflexively. While there is much talk of theoretical sampling through constant comparative methods, so that one can become more and more confident about conceptual categories and patterns, the intellectual task behind the method is to test our assumptions every step of the way, using as many relevant facets and sources of data as we can find (triangulation).

In short, we have what Stake calls "our own rigors --work to do, methods to rethink, some counter-intuitive ideas to develop."

When the final report of a qualitative case study is submitted, "it must be a convincing argument systematically presenting data to support the researcher's case and to refute alternative explanations." (Morse, p. 231). Where most initiates to case study -- or to any other research -- go wrong is in their failure to explain and track their process openly. The research design should reveal how they chose the case and why; with whom they will talk and how often; what other sources of information they will use; what instrumentation will be employed, if any; what recording mechanisms are planned; the nature of library or policy legislation searches, if any; the nature of participant and peer input processes; what data displays are expected; how an audit trail will be provided; the expected duration of the study --whatever the researcher has in mind for the study. This sets the stage for reporting, as well. Whatever has actually been used to produce the report should be discussed or otherwise included. Reviewers reject a report more often from insufficient information about process than for any other reason. They want to know how you got to the airstrip you landed on.

It is also insufficient to scatter all the "politically correct" research jargon across the pages of the report. Some reviewers tend to see ill-conceived and poorly executed research lurking behind every terminology dump. They prefer straightforward writing that even lay readers can understand. Dreher (1994), herself an ethnographer but also a reviewer of proposals, states that "most research proposals would be vastly improved by omitting the terms *qualitative* or *quantitative* altogether...[Their use] seldom, if ever, adds either insight or credibility to the design and more frequently raises questions in the review process that need not have occurred." (p. 284).

Improving HRD Research Through Qualitative Case Studies

As in many other fields, the emphasis on quasi-experimental and survey design research studies have left HRD academics and practitioners with more questions than answers. While quantitative approaches to HRD questions have provided some evidence of possible relationships between variables, the differences between treatments or interventions, or a glimmer of causal relationships between variables, we are still left with questions of why, when, where, and how-- and especially, what to do to help practitioners and their organizations. HRD has provided an outline of the puzzle of what does and does not work; sometimes adding to the development of theory. But what is missing are the puzzle pieces that fill in the picture between the edges -- which describe, explore, and depict real life and everyday practice. Qualitative researchers are beginning to step into the center to find these pieces.

What is needed are several case studies that cut across organizations so that we can begin to extrapolate findings across cases and inform ourselves and our stakeholders of the relative effectiveness and outcomes of various HRD strategies (Russ-Eft, Preskill & Sleezer, 1997). An example is a case study presented at AHRD in 1997 which examined the degree to which HRD is integrated (as part of the business group) in organizational strategic planning. Using within-case and cross-case analysis, the researcher found a continuum from no participation , to use of HRD as process facilitators, to stakeholder input. In none of the corporations was HRD fully integrated in strategic planning (sharing responsibility at board level) although one was moving in that direction. This is instructive not only to the HRD community, but also to the companies that served as research sites. (Conine, 1997).

Silverman (1993) has said that, while academic research by definition has to have theory in mind, it needs also to be sensitive to historical, cultural, political and contextual nuances. It may be exploratory, but perhaps equally as often, it is not. Hypotheses can be and are tested by the weight of qualitative evidence. He deflects criticism from some quarters that qualitative research (and particularly field research) is "relativistic" by focusing instead on what it can do and has already done. It makes significant social science contributions. It does this, he says, by " 1) participating in debates about public policy, 2) providing new opportunities for people to make their own choices [revealing more options], and 3) offering a new perspective to practitioners and clients" (p. 186). In essence, research that is theoretically oriented need not be practically sterile. In the case of HRD research, the case study may be our secret weapon to avoid the sterility of practice that, if not stemmed, could even lead to our own professional demise.

References

Bogdan, R.C. & Biklen, S.K. (1992). *Qualitative research for education: An introduction to theory and methods.* Boston: Allyn and Bacon.

Conine, C.T. (1997). The integration of human resource development into the strategic planning process: A comparative case study of three corporations. *Proceedings of the Academy of Human Resource Development,* Atlanta, Georgia, March 6-9.

Cronbach, L.J. (1975). Beyond the two disciplines of scientific psychology. *American Psychologist, 30,* 116-127.

Denzin, N.K. & Lincoln, Y.S. (1994). *Handbook of qualitative research.* Thousand Oaks, CA: Sage.

Dreher, M. (1994). Qualitative research methods from the reviewer's perspective. In J.M. Morse (Ed.), *Critical issues in qualitative research methods.* Thousand Oaks, CA: Sage.

Hamel, J. (1993). *Case study methods.* Newbury Park, CA: Sage.

Janesick, V.J. (1994). The dance of qualitative research design. In N.K. Denzin & Y.S. Lincoln (Eds.), *Handbook of qualitative research.* Thousand Oaks, CA: Sage.

Merriam, S. B. (1988). *Case study research in education: A qualitative approach.* San Francisco: Jossey-Bass.

Morse, J.M. (1994). Designing funded qualitative research. In N.K. Denzin & Y.S. Lincoln (Eds.), *Handbook of qualitative research.* Thousand Oaks, CA: Sage.

Pant, N. (1995). Not from these parts: A tale of organizational turmoil. In T.C. Pauchant (Ed.), *In search of meaning.* San Francisco: Jossey-Bass.

Reason, P. (1994). Three approaches to participative inquiry. In N.K. Denzin & Y.S. Lincoln (Eds.), *Handbook of qualitative research.* Thousand Oaks, CA: Sage.

Russ-Eft, D., Preskill, H. & Sleezer, C. (1997). *Human resource development review.* Thousand Oaks, CA: Sage.

Sandelowski, M. (1994). The proof is in the pottery: Toward a poetic for qualitative inquiry. In J.M. Morse (Ed.), *Critical issues in qualitative research methods.* Thousand Oaks, CA: Sage.

Schwandt, T.A. (1997). *Qualitative inquiry: A dictionary of terms.* Thousand Oaks, CA: Sage.

Schwartz, H. & Jacobs, J. (1979). *Qualitative sociology: A method to the madness.* New York: Free Press.

Silverman, D. (1993). *Interpreting qualitative data.* London: Sage.

Smith, L.M. (1994). Biographical method. In N.K. Denzin & Y.S. Lincoln (Eds.), *Handbook of qualitative research.* Thousand Oaks, CA: Sage.

Stake, R.E. (1995). *The art of case study research.* Thousand Oaks, CA: Sage.

Van Maanen, J., Dabbs, J.M., Jr., & Faulkner, R.R. (1982). *Varieties of qualitative research.* Beverly Hills, CA: Sage.

Yin, R.K. (1989). *Case study research.* Newbury Park, CA: Sage.

The Promise Of Narrative Research in HRD

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Although many qualitative studies refer to themselves as hermeneutic or constructivist, most qualitative studies are still based on the same realist and objectivist assumptions as quantitative studies. In fact, often the only difference between so-called qualitative and quantitative studies is the form of data and analyses they employ. This paper describes how a single study yields very different findings depending not on the type of data used, but on the assumptions the researcher holds. The hermeneutic assumptions that researchers organize, construct, and develop a story about their data are explored as a more effective basis for researching learning and change in organizations than the realist assumptions that the researcher discovers and reveals reality. Narrative analysis is described as a useful hermeneutic strategy for analyzing data on organizational change or learning.

Ever since I worked in management development for a large Japanese corporation in Tokyo, I have been trying to figure out how to make direct and explicit links between individuals and their organizations and to understand how individual learning leads to organizational change. In the case of my Japanese experience, I wanted to know the extent to which courses in intercultural skills and understandings contribute to internationalizing the organization.

On one level, this appears to be a training or intervention outcome study. However, on a methodological level, it requires a methodology that can link the micro (individual) to the macro (organizational) level. Currently, most research or evaluation studies make this link by way of inference: if we can control for enough intervening or confounding variables, then we can infer that the individual level intervention we are interested in contributed to the organizational change. However, for research done in organizations, controlling for confounding variables becomes next to impossible. This problem is further compounded by the fact that most outcomes are so embedded in a complex and integrated system that we often have trouble even pinpointing where to locate a particular outcome. Nevertheless, even if we could maintain satisfactory control over the conditions of our research and make our inferences with confidence, we still could not trace how the intervention actually worked to produce the outcome for which we had hoped. Problems such as these have contributed to the increasing use of qualitative methodologies given that verbal data can better capture complexity than numerical data.

However, qualitative data itself is no guarantee that we can any better understand the link between micro and macro or the complexity of organizational change, particularly when the data analyses are based on the same empirical assumptions as quantitative research. What is needed is a way of analyzing qualitative data that reflects the assumption that social reality is both constructed and interpretive. Narrative analysis directed at understanding the patterns of language we share enables us to systematically examine the social construction of groups. Based on an intersubjective understanding of knowledge and its production, narrative analysis provides not only a method that links individual learning with change in larger systems, but that illuminates the process by which that change takes place.

This paper begins with the description of a research study aimed at understanding the learning needed to transition a regulated telecommunications company into an organization capable of prospering in a newly deregulated, market driven, and highly competitive industry. This is followed by a conceptual comparison of empirical and interpretive approaches to qualitative research. Next comes a description of the narrative analysis of the data and what it illuminated about the link between individual learning and organizational change. The paper concludes with a discussion of how narrative research opens new avenues for exploring complex large systems' change in organizations.

Transforming "Ma Bell": Qualitative Analysis from an Empirical Perspective

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The efforts to transform the regulated and protected "Baby Bells" of the early 1980's into innovative and competitive companies in today's telecommunications industry provide classic cases for studying the complexities of transformative systemic change in organizations. The purpose of the study described here was to explore the relationship between employee critically reflective learning and organizational transformation (Brooks, 1989; Brooks, 1992). The data, collected in the late 1980's, consisted of interviews with managers ranging from "new hires" to the chairman and CEO, public documents and articles about the company, and participant and non-participant observation. To get my sample, I asked the internal organizational development consultant to give me the names of managers he perceived as questioning the way business had traditionally been done and then acting to change those patterns. I then contacted each of those managers and asked them for a similar list. I interviewed the 28 managers who received the most nominations from their nominated colleagues (Patton, 1990).

To analyze this data, I used Lincoln and Guba's (1985) description of constant comparative analysis as a model. I coded, clustered, and thematized the data. Finding the results of this analysis to lack focus, I recoded the data according to the research questions I had asked. I wanted to know how managers became critically reflective, what the company did to encourage or inhibit their thinking and action, and what changes they had enacted. Analysis according to these questions was far more productive than the constant comparative analysis recommended in the literature. However, I continued to believe that I had missed what was important about intentional organizational change efforts.

One manager's words continued to haunt me: "Trying to change this company is like putting your hand in lukewarm oatmeal--when you take your hand out, all you have is a gooey hand. The hole you made slowly fills in and very soon looks as though you had never been there." Can individuals change organizations? Even if those individuals are very powerful? How does intentional change in organizations happen (if it does happen)? How can we study such complexity without oversimplifying it? What data and which method of analysis would move us past such a heavy reliance on inference?

Where to Now?

My search took me to philosophy, systems of inquiry, and ultimately the social sciences. Drawing on studies of cultural systems in anthropology (Geertz, 1979), I became more comfortable with my skepticism and individualism.

> The Western perception of the person as bounded, unique, more or less integrated into a motivational and cognitive universe, a dynamic center of awareness, emotion, judgment, and action organized into a distinctive whole and set contrastively both against other such wholes and against a social and natural background is, however incorrigible it may seem to us, a rather peculiar idea within the context of the world's cultures. (p. 59)

Then referring to the work of Alfred Schutz (1964), I came to see that knowledge and information within organizations is socially distributed, or in other words, no one person in an organization knows everything. This turn toward the social nature of learning is also reflected in disciplines and fields of practice other than anthropology and sociology, including physics (Bohm, 1996) and psychology (Gergen, 1991, 1994; Mitchell, 1996; White & Epstein, 1994).

A critical look at the philosophy of science and research methodologies made clear that a blind faith in empirical research with its assumption of a mechanistically constructed reality, clear boundaries between researcher and subject, and a correspondence between language and reality had become impossible to sustain. The issues raised by hermeneutic and postmodern perspectives has forced researchers to ask hard questions: if reality is so transient, our capacity to observe it so hampered, and our ability to express it so inexact and partial, on what basis do we even undertake research and then claim it of any use for the betterment of humankind?

Action inquiry began to seem to be the logical form for research since the methodologies incorporate an understanding of reality as being continually constructed and reconstructed over time, knowledge as the product of both the researcher and the researched, and the representation of research as secondary to its usefulness in relation to action. However, action inquiry is limited in that its practitioners rarely publish what they find. They are more likely to write about the action inquiry process itself (Brooks & Watkins, 1994). Even the most skeptical of practitioners and scholars among us cannot help but question the value of research that does not contribute to a body of knowledge, even knowledge that is partial, transient, and interpretive rather than universal, eternal, and objective.

A Narrative Turn

Our most widely held assumptions about learning come directly out of behavioral and cognitive learning theories. In keeping with both theories, we generally assume that learning occurs within rather than between or among individuals. Like behavioral learning theory, we often assume that motivation is linked to material rather than relational incentives and rewards. Like cognitive learning theory, many of us think about the human mind as being structured by information like a computer, rather than by language. But what if we think of learning as being collective? What if we think of the mind as being structured by language? These assumptions imply a far different understanding of organizational change, as well as a radically different way of carrying out organizationalresearch.

Recent shifts in the social sciences based on work in the humanities have forefrontedthe role of narrative as a part of social and individual organization. The anthropologist, Edward Bruner (1986), has pointed out how cultures are narratively organized, giving the example of how Native Americans have shifted their cultural story from one of adaptation to one of emancipation. In psychology, Jerome Bruner (1986, 1990) has reformulated cognitive learning theory away from its analogy with computer systems and information processing toward a set of understandings of ourselves and our world as made possible as well as bounded by the language and narratives our cultures and societies make available to us.

Understanding ourselves and our cultures and societies as narratively rather than mechanistically structured allows us to look at learning, change, and organizations in entirely new ways. For example, a narrative understanding allows us to think of the present in terms of both a past and a future. Unlike the universalized static structures of realist research, narrative carries within it both human intention and moral imperative. Narrative is socially situated in that it implies both a writer and a reader. This shared dimension of narrative allows us to look at the ways in which knowledge is co-constructed in that others' responses to what we say, our perceptions of what our audiences know and value, and the context within which we narrate our experiences and intentions all contribute to how we tell our narrative. For example, if we narrate our experiences to a doctor or another helping professional, we may construct them as problematic in order to fulfill our sense of our part in a doctor-patient interaction. If the doctor is an allopath, we may omit from our story that we have been drinking particular herbal teas, taking homeopathic remedies, or receiving acupuncture.

Although to some extent our narratives are constructed at the micro-level, we also co-construct them within the constraints of the larger cultures within which we find ourselves. Foucault (1980), for example, argues that people, having internalized institutional mores, become the perpetual evaluators of their own behavior. They become the objects of their own project to form "docile bodies." Foucault believes we live in a society of an ever-present "gaze." The question that emerges for employees and groups in intentional organizational change effortsis on which narrative our normalizing judgment of ourselves is being based? Is it the narrative we want? Who wants it? Whose interests does it serve?

Narrative Research: The Transformation of Ma Bell Revisited

A re-analysis of my original data using narrative techniques on organizational transformation at one of the Baby Bells yielded multiple narratives about the change within the organization.

The dominant narrative was the one sanctioned by the organization. It read, "The organization has to change and individual employees are what are stopping it. They will have to get on board." The counter narrative storied opposition to the dominant narrative. It read, "The move to change the organization is just a fad and the status quo will soon prevail." The shadow narrative storied the abuse that was an inevitable companion of the dominant narrative. It read, "Employees who insist that the organization live according to its own stated narrative will be punished." The silent narrative was what most people knew, but did not publicly articulate. It read "This change effort is really about who is going to have power in this organization."

Each of these narratives places the narrator in relation to other employees. Each narrator summons data from either their own experience or stories about the experience of others to illustrate the truth of one or more of their preferrednarratives. For example, a man who narrated the organization according to the counter narrative pointed out how an engineer was made vice president of marketing instead of someone skilled in and already involved in marketing because the engineer was part of the old boys' network. The narrator of this story sees himself as an outsider. In the future, he is likely to act consistently with this narrative. The narrator also sees himself as morally in the right and those subscribing to the dominant narrative as in the wrong. When this same story is storied according to the dominant narrative, it is told as an unfortunate, but rational action taken on the basis of what was the safest course for the organization. Thus, a change that is officially treated as a rational organizational change effort, becomes more of a moral tale involving both oppression and victimization when storied according to the counter narrative.

A narrative as opposed to an empirical analysis allows us insight into how employees understand themselves in relation to others and how they are likely to respond and act. If we understand individuals and organizations as narratively constructed, then change and learning become a process of working with story rather than the more mechanistic approach of working directly and instrumentally with performance or patterns of behavior.

In my original analysis I was looking for empirical facts. Although I claimed my work was interpretive, I now understand it to have been an objectivist and realist qualitative study. I assumed that I could gather facts about how employees learned to reflect critically and how they used that skill to implement organizational change. However, I was troubled by the "oatmeal" story which said that no one person, no matter how powerful, could make lasting change in the organization. I could see that employees were confused and did not know what to believe about the organization. They seemed to believe that if they could only figure out what the "truth" was, then they would be happy to act accordingly. They just did not know which "truth" to trust. Which story was the "real" organizational story?

An examination of the social narratives in an organization reveals the stories by which people are structuring their interpretations of events and ultimately, guiding their actions. If organizations are viewed in this way, change and learning then become a process of collectively altering social narratives rather than planned and rational attempts to influence performance.

Conclusion

This paper has examined the interpretive use of narrative rather than the empirical use of content analysis (Polkinghorne, 1995) as a way of making sense of data on individual and organizational learning, development, transformation or change. Through comparing two differentapproaches to analysis of the same data on organizational transformation, I draw out the strengths of narrative analysis for understanding how individual learning is linked to organizational change. Ultimately this research has implications not only for how we can monitor something as apparently amorphous as intentional organizational change, but for how we more effectively can go about influencing change, as well.

References

Bohm, David. (1996). On dialogue. London: Routledge.

Brooks, A. K. (1989). Critically reflective learning within a corporate context. Unpublished doctoral dissertation, Columbia University Teachers College, New York.

Brooks, A. K. (1992). Building learning organizations: The individual-culture interaction. Human Resource Development Quarterly, 3 (4), 323-336.

Brooks, A. K., & Watkins, K. E. (1994). The new era for action technologies: A look at the issues. In Brooks, A. K. and Watkins, K. E. (Eds.) The emerging power of action inquiry technologies (pp. 5-16). San Francisco: Jossey-Bass.

Bruner, E. M. (1986). Ethnography as narrative. In Turner, V. M., & Bruner, E. M. (Eds.) The anthropology of experience (pp. 139-155). Chicago: University of Illinois Press.

Bruner, J. S. (1986). Actual minds, possible worlds. Cambridge, MA: Harvard University Press.

Bruner, J. S. (1990). Acts of meaning. Cambridge, MA: Harvard University Press.

Foucault, M. (1980). Power/Knowledge: Selected interviews and other writings. New York: Pantheon Books.

Geertz, C. (1979). From the native's point of view: On the nature of anthropological understanding. In Local knowledge: Further essays in interpretative anthropology. New York: Basic Books.

Gergen, K. J. (1991). The saturated self: Dilemmas of identity in contemporary life. New York: Basic Books.

Gergen, K. J. (1994). Realities and relationships: Soundings in social construction. Cambridge, MA: Harvard Press.

Lincoln, Y. S., & Guba, E. G. (1985). Naturalistic inquiry. Newbury Park, CA: Sage.

Mitchell, S. (1996). Hope and dread in psychoanalysis. New York: Basic Books.

Patton, M. Q. (1990). Qualitative evaluation and research methods (2nd ed.). Newbury Park, CA: Sage.

Polkinghorne, D. E. (1995). Narrative configuration in qualitative analysis. In Hatch, J. A., & Wisniewski, R. (Eds.) Life history and narrative (pp. 5-23). London: The Falmer Press.

Schutz, A. (1964). Collected papers II: Studies in social theory. The Hague: Nijhoff.

White, M., & Epstein, D. (1990). Narrative means to therapeutic ends. New York: W. W. Norton & Co.

HRD Theory Building Through Qualitative Research

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Qualitative research in Human Resource Development explores the dynamics of work organizations and how individuals interact and affect each other. Recently, it has becoming increasingly important to provide a theoretical framework so that a more rigorous groundwork supports and reflects the depth to which qualitative investigations reach. This paper presents various theoretical frameworks and argues for their inclusion.

In recent years, human resource development (HRD) scholars have been attracted to qualitative research as a means of exploring the complexity of human behavior in work organizations. HRD professionals, researchers and academic faculty found this form of inquiry attractive because of its holistic and nonmanipulative character and because of its ability to convey the interpretive perspectives of both the researcher and the study's informants. In addition, many saw this approach as less artificial than narrowly focused studies under controlled conditions. However, the enthusiastic embrace of the qualitative paradigm has often been shortsighted. That is, studies tended to be highly descriptive but fell short in using data to build theory. While this form of study is attractive because of its rich descriptive nature (Geertz, 1973), it is the underlying role and purpose of theory that gives it power and scientific meaning (Glesne & Peshkin, 1992; Golden-Biddle & Locke, 1997). Instead of testing hypotheses, the role of qualitative research in a field as relatively young as HRD is to generate sorely needed new doctrine (Markick, 1990).

The lack of a useful strategy constrains the development of new theory in qualitative research that is designed to address HRD problems. The aim of this paper, therefore, is to offer ideas and suggestions for the development of new doctrine. The importance and use of grounded theory will be discussed and followed by recommendations for crafting and arguing the uniqueness of new assumptions.

Grounded Theory

Qualitative methods are frequently used in studies where there is no relevant theory to guide the research. While preconceptions are not totally abandoned, the lack of predetermined hypothesizes allows researchers greater freedom to explore new scientific territory. In the process, theoretical explanations emerge as the data converge into dominant patterns and themes. The concept of grounded theory, as developed by Glasser and Strauss in 1967, therefore, uses data to develop new theoretical accounts to explain the topic under study.

Four central criteria characterize the development of grounded theory (Glasser & Strauss, 1967; Strauss & Corbin, 1990). First, the theory must "fit" the topic of study. That is, it must be either related to the problem of inquiry and in some way build on existing thinking or offer theory where none existed. Such links are critical to a field as broadly based as HRD. Second, it must be "understandable" to the study's informants and well as those who research and practice in that area. This point asks if the new theory is both feasible and reasonable. Third, the theory must be "general" and abstract enough to be applicable to a variety of settings. The concept of general is more appropriately linked to the notion of transferability instead of generalizability. This is an important distinction. In the former, the onus is on the reader, who can choose to "transfer" or relate the general nature of the theory and findings of a given study to his or her own situation. Finally, theory should provide "control" of action by proposing relationships among concepts. This aspect of grounded theory emphases its explanatory power. Researchers have likened the generation of theory to the development of models that are analogous to stories of cause and effect (Golden Biddle & Locke, 1997; Strauss & Corbin, 1990). Other scholars discussed theory building as behavioral rules or axioms (Spradely, 1979). For example, Hansen and Kahnweiler's (1995)

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comparative study of HRD professional and top executives found positional and occupational differences in values, beliefs, causal attributions and priorities. They surmised that these differences created a competitive undercurrent, which lead to the breakdown of communication between top management and the departments that reported to them.

In addition to developing novel explanations, theoretical explanations can confirm or deny a research perspective. For example, qualitative methods are often used in the study of culture. An important cultural perspective is the theory of occupational cultures. This theory suggests that the nature of one's work is a more powerful determiner of work behavior than cultural membership in any one organization (Trice & Beyer, 1993). Research by Hansen, Kahnweiler, and Wilensky (1994) confirmed and added ammunition to this theoretical perspective in their qualitative study of HRD specialists by suggesting that these professionals do constitute an occupational culture of their own. Moreover, their study theorized that the acculturation of HRD professional may be very different and often in conflict with the expectations of their work organizations.

Developing Theoretical Points

The task of developing grounded theory occurs in three stages (Golden-Biddle & Locke, 1997). An HRD problem must be first linked to a body of literature. This link is generally tied to other research that has attempted to study a similar question. For example, Hansen & Headley (in press) contexturalized their study of HRD in West Africa to literature associated with cultural relativity, organizational trust, and psychological ownership.

Links may also reflect commonality of research perspectives, i.e. the importance of societal culture as a conceptual and behavioral referent in organizational life. Examples of similar links might be ties to feminist literature, critical inquiry, or philosophy of post-modern management.

Once the importance of studying the research problem is established, it is essential to highlight what is problematic about current research. Gaps imply that not enough is known or that current research is flawed. For example, Watkins and Marsick (1991) explained the need for their study of informal and incidental learning by highlighting the lack of prior study that attempted to compare this kind of learning under formal and informal conditions. Qualitative studies may also suggest, for example, that previous positivistic research was too narrow and that it failed to uncover critical issues.

Finally, new theory must make suggestions for how a current study will contribute to a better understanding, explanation, and solution to the problem. Showing how new theory can expand or refute existing thinking is where we may be the weakest. Yet, it is this strain of theoretical development that truly sets us apart from hypothesis testing.

Illustrating Theory

In illustrating theory it is helpful to think of it as a kind of narrative with its own plot development and characters whose actions theoretically influence the story's outcome. Strauss and Corbin (1990) refer to this as selective coding and Golden-Biddle and Locke (1997) call this model building. Stories are helpful metaphors. They have a beginning that describes the problem and its setting. A Middle follows which shows evidence to support change in the form of new theory. Theoretical stories conclude with an ending that shows how the present account contributes to the problem's resolution and the literature as a whole.

Stories can also be told from a variety of perspectives. The notion of different perspectives is linked emic and etic traditions of reporting data (Pike, 1967). The emic perspective tells the story from the viewpoint of the informant and uses their own vocabulary and definitions in the form of raw quotes and stories to illustrate the grounding of emergent theory. For example researchers can uncover an informant's emic perspective by asking their interviewees to deconstruct their own stories (Hansen & Kahnweiler, 1993). As informants analyze their narratives, they reveal much of their own perspective in how they label characters and explain the moral of their tale.

Etic reporting tells the story from the perspective of the researcher. This story account may occur in the form of historical reporting of a case where the researcher attempts to find truth by triangulating and verifying all relevant sources. The perspective of the researcher may, in other cases, be critically interpretative and philosophical in tone by attempting to link emergent theory with associated literature.

There are also stories that report the "voices not heard" (Boje, 1991). These stories give expression to actors that may have been perceived to play a marginal role in driving the story's plot. Such stories question why these actors have traditionally played minor roles and theoretically asks if the outcome could have been different and perhaps better had these characters played a stronger role in the development of the story. An understanding of such stories is critical to HRD research if the field is to truly unearth its theoretical roots.

Finally, in illustrating theory it is not only critical to use data as proof of how the theory emerged, it is also helpful to use flow charts and other visual displays. While such exhibits are typically associated with quantitative data from experimental or survey research, they can equally show relationships among key variables found in qualitative data. For example, a flow chart showing how one variable may influence another, which then may uniquely effect another is a powerful aid in conveying a theoretical storyline. Likewise, visual displays can show the linear or non-linear nature of related patterns.

Summary and Implications

As qualitative methods are employed in more and more studies of HRD issues, it is critical that we remember that the underlying purpose of this inquiry is to build theory. As a relatively new field, theory building is important as we support the field's growth and emerge as a discipline with its own body of scientific knowledge. These points are important not only for the conduct and analysis of present research, but also for the training of future HRD scholars. Therefore, we should emphasize the methodological rigors of conducting qualitative research, along with the importance of using data, so that theory will set a new rigorous foundation for our field.

References

Boje, D. (1991). The storytelling organization: A study of story performance in an office supply firm. Administrative Science Quarterly, 36(1), 106-126.

Geertz, C. (1973). The interpretation of cultures. New York, NY: Basic Books.

Glesne, C.& Peshkin, A. (1992). Becoming qualitative researchers: an introduction White Plains, NY: Longman.

Glasser, B. & Strauss, A. (1967). The discovery of grounded theory. Chicago, IL: Aldine.

Golden-Biddle, K. & Locke, K. (1997). Composing qualitative research. Newbury Park, CA Sage.

Hansen, C. (in progress). Privatization and productivity in West Africa: the role of culture, trust, and ownership.

Hansen, C. & Headley, J. (In press). Human resource development in West Africa: cultural constraints to productivity. Human Resource Development International.

Hansen, C., Kahnweiler, W. & Wilensky, A. (1994). Human resource development; a study of occupational culture through organizational stories. The Human Resource Development Quarterly, 5(1), 55-74.

Hansen, C. & Kahnweiler, W. (1995). Organizational tension and occupational scripts: stories from human resource professionals and top executives. Human Resource Management Review. 5(1) 25-52.

Hansen, C. & Kahnweiler, W. (1993). Storytelling: an instrument for understanding organizational dynamics. Human Relations, 46(12), 1391-1049.

Marsick, V. (1990). Altering the paradigm for theory building and research in human resource development. Human Resource Development Quarterly, 1,(1) 5-25.

Pike, K. (1967). Language in relation to a unified theory of the structure of behavior. The Hague, The Netherlands: Morton & Co.

Spradley, J. (1979). The ethnographic iterview. New York, NY: Holt, Reinhardt & Winston

Strauss, A. & Corbin, J. (1990). Basics of qualitative research. Newbury Park, CA: Sage.

Trice, H. & Beyer, J. (1993). The cultures of work organizations. Englewood Cliffs, NJ: Prentice Hall.

Watkins, K., Marsick, V. (1991). Toward a new theory of learning in the workplace: a focus on informal and incidental learning. The journal for research on learning in the workplace. 1(1) p.13-23.

Updating The Critical Incident Technique After Forty-Four Years

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This paper examines the development and use of The Critical Incident Technique as articulated by Flanagan (1954). The modifications to this technique that have been made over the years are described, and a constructivist approach is offered as a way of updating this technique.

The Critical Incident Technique (CIT) is a method for collecting data that has been widely used in many research settings since it's development by Flanagan (1954). Shattuck and Woods (1994) have suggested that Flanagan's method was a "giant step forward in conducting field studies" (p. 1084). More recently, however, scholars such as Shattuck and Woods have articulated the need to update this method so that it includes a cognitive component in addition to the behavioral components typically associated with the use of this method. This paper describes the CIT method as it was originally developed, examines some of the ways in which it has been variously used, and depicts new strategies that enhance this method by incorporating a constructivist approach in the collection of data.

A Description of the Method

The Critical Incident Technique was formally introduced by Flanagan (1954) in the 1950's as an outgrowth of studies in the Aviation Psychology Program of the United States Army Air Forces in World War II, where it was used to gather specific incidents of effective or ineffective behavior with respect to a designated activity. It consists of a set of procedures for collecting direct observations and interviews from memory of human behavior and classifying them in a way that facilitates their potential usefulness in solving practical problems and developing broad psychological principles (Flanagan, 1954). Flanagan acknowledges that a substantial number of studies have been conducted to determine the critical requirements for specific occupational groups or activities. Other documented uses of this technique include deriving measures of typical performance and proficiency, as well as applications in selection and classification, job design and purification, training, operating procedures, equipment design, motivation and leadership and counseling and psychotherapy.

This method has been widely used in the field of human factors (Shattuck & Woods, 1994), educational research (Copas, 1984; Leles, 1968, Preskill, 1997), marketing research (Bitner, Booms & Tetrault, 1990; Bitner, Nyquist, & Booms, 1985), and research within the travel (Gilbert & Morris, 1995) and service industries (Edvardsson, 1992; Hoffman, Kelley & Rotalsky, 1995). The Critical Incident Technique (CIT) is considered to be a research method that is "especially useful in exploratory research designed to examine very specific, situationally relevant aspects of managerial behavior" (Yukl, 1981, p. 95) and has been widely used in management research on managerial behaviors (Campbell, Dunnette, Lawler, & Weick, 1970; Yukl, 1981; Yukl, 1994). Stano (1977) has noted that this technique holds much promise for speech communications scholars. The Critical Incident Technique has been used as a research method, and has been described and compared with other research approaches in over 700 studies (Fivars, 1980). The general reliability and validity aspects of this technique have been assessed by

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Andersson and Nilsson (1964), and they conclude that "information collected by this method is both reliable and valid" (p. 402). Bitner, Nyquist, and Booms (1985) report that additional studies by Ronan and Latham (1974) and White and Locke (1981) reached the same conclusions.

The Critical Incident Technique is a systematic and sequential method for collecting observed incidents, or observations previously made which are reported from memory. The CIT outlines procedures for collecting such incidents having special significance and meeting systematically defined criteria. As a method for classification, it can be categorized with other inductive grouping procedures such as factor analysis, cluster analysis, and multidimensional scaling (Bitner, Booms & Tetreault, 1990). With such grouping procedures, the researcher "lets the data suggest the system" (Hunt, 1991, p. 178), and a classification or schema is generated only after the data are analyzed. The researcher does not impose a classification system on the data. Unlike the other grouping procedures, the Critical Incident Technique uses content analysis rather than quantitative solutions in the data analysis. According to Kerlinger (1986), the researcher "takes the communications that people have produced and asks questions of the communications" (p. 477). Similarly, it produces stories based upon recalled or observed incidents which are then classified. The five major units of analysis in content analysis are words, themes, characters, items and space-time-measures (Kerlinger, 1986; Weber, 1990).

Flanagan (1954) defines an incident to be "any observable human activity that is sufficiently complete in itself to permit inferences and predictions to be made about the person performing the act" (p. 327). For a critical incident to be critical, it must make "a significant contribution, either positively or negatively, to the general aim of the activity" (p. 338). Flanagan suggests that the definition of significant will be dependent upon the nature of the activity. He outlines five main steps that form the procedures associated with this technique. *In the first step, the general aims of the activity must be established.* According to Flanagan, the functional description of an activity "specifies precisely what is necessary to do and not to do if participation in the activity is to be judged successful or effective" (p. 336). Flanagan suggests that the general aim of an activity should be a "brief statement obtained from the authorities in the field which expresses in simple terms those objectives to which most people would agree" (p. 337). *The second step involves plans and specifications.* In other words, precise instructions must be provided and specifications must be established prior to collecting the data. Flanagan (p. 338-339) outlines the following necessary specifications:

(a) The situations observed: The delimitation of the situation to be observed which must include information about the place, the persons, the conditions and the activities;

(b) The relevance to the general aim: Determining whether or not the specific behavior observed or recalled from memory is relevant to the general aim of the activity;

(c) The extent of effect on the general aim: How important the effect of the observed incident has on the general aim, a level of positive contribution to the general aim in specific terms and in a concrete example, and the corresponding level of negative effect on the general aim expressed in similar terms;

(d) Persons to make the observations: The persons making the observations must have sufficient familiarity with the activity. Appropriate training should be provided to the observers regarding the general aim of the activity, and the specifications and definitions for which judgments will be made.

The third step in this process is collecting the data. Flanagan acknowledges that the most crucial aspect of the data collection procedure is the questions that are asked of the participants. He notes that the question(s) should refer to the general aim of the activity. He also indicates that the interviewer should apply the following criteria to the incidents while they are being collected: (a) is the actual behavior reported; (b) was it observed by the interviewer; (c) were all the relevant factors in the situation given; (d) has the interviewer made a definite judgment of the criticalness of the behavior being described. He also suggests that a sample form be created for the collection of this data.

The *fourth step in this process is analyzing the data and the fifth step is interpreting and reporting the findings.* Three primary problems are noted by Flanagan (1954) in analyzing the data: (a) the selection of a general frame of reference for describing the incidents (this is usually dominated by the planned use of the findings); (b) the inductive development of the categories; (c) the selection of one or more levels along the specificity-generality continuum in reporting the data (general behaviors or specific behaviors) (p. 344-345). In the final step, Flanagan indicates that the nature of the judgments made in collecting and analyzing the data must be carefully reviewed.

A major strength associated with the Critical Incident Technique is that the collection and tabulation of information obtained in the interview make it possible to formulate the critical requirements of an activity. According to Flanagan (1954), such a listing of critical behaviors provides a sound basis for making inferences as to requirements in terms of aptitudes and training. A summary of the benefits and strengths of the CIT is provided in Table 1.

Table 1
Benefits of the Critical Incident Method

- Emphasis on observable behaviors or behaviors recalled from memory.
- Collected from "actor's" perspective vs. the opinions of outside experts.
- Especially useful in determining detailed situational behavior.
- Develops a comprehensive picture.
- Best technique for developing behavioral criteria.
- Ability to discover both universal and contingent behavior.
- Proven methodology -- used with considerable documented success.
- Generates rich qualitative data.

Adapted from Clawson (1992)

Variations in the Use of the Critical Incident Technique

Although many researchers have documented the use of the Critical Incident Technique as it was originally intended by Flanagan, the technique has been modified by some researchers over the years, particularly in the field of human factors and management, to meet specific requirements.

Shattuck and Woods (1994) report that Pew, Miller and Feeher (1981) used a variation of the CIT that incorporated an application-oriented, retrospective method for the prediction of future performance in a nuclear power plant environment. The purpose of their research was to determine the effectiveness of planned improvements to the facilities. However, given the cost factors associated with the implementation of these improvements, Pew et al. selected four events that had previously occurred and investigated them in detail to predict future performance based on data, models, and planned improvements. Another retrospective variation, the Critical Decision Method was developed by Klein et al. (1989) and has been used in domains such as fire ground commanders, tank platoon leaders, design engineers and computer programmers. A third variation, "critical incident studies" (Shattuck & Woods, 1994, p. 1082) was used by Cook and Woods (1991) to investigate the performance of anesthesiologists. In this approach, data was collected unobtrusively on anesthesia incidents that occurred during surgical procedures. Each incident is then critiqued by practitioners to help identify decision points, alternative courses of action, and resulting consequences.

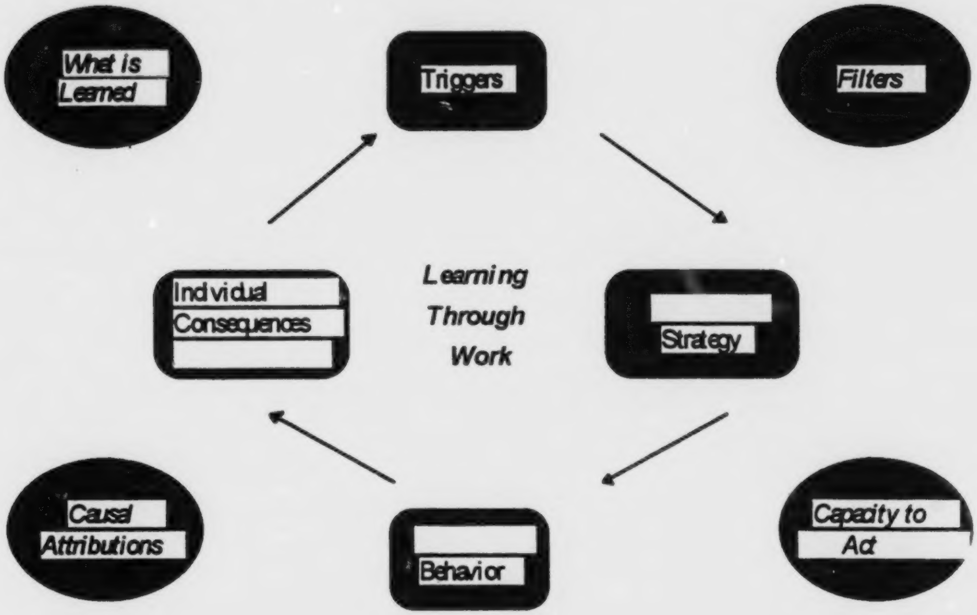
Within the management field, a report by Charles River Consulting (1986) describes a variation to Flanagan's (1954) method by using a behavioral interview. This approach was designed to uncover precise information on the actions and thoughts that relate to competence of high-performing managers. Yukl (1994) describes how Boyatzis (1982) used a variation of the CIT called the behavioral event interview to discover competencies related to managerial effectiveness. These variations reflect the evolution of the CIT as a tool used by researchers and practitioners. Shattuck and Woods (1994) suggest that these modifications in the CIT also reflect a movement away from purely behaviorally oriented research toward an interest in the role of cognition.

Moving from a Behaviorist to a Constructivist Critical Incident

As Lincoln (1997) has observed, any research method can be used in a qualitative or quantitative manner, depending on whether or not the researcher approaches the data from a constructivist or a positivist framework. From a constructivist approach, the aim of inquiry is understanding and reconstruction of the constructions that the respondent holds including the researcher (Guba & Lincoln, 1994). The ultimate objective is to understand the point of view of the respondent from the respondent's world of lived experiences. To understand the meaning and to grasp the respondent's definition of a situation and then interpret it is reflective of this approach (Schwandt, 1994). Elements of a constructivist methodology also include bounding the inductive inquiry within a particular naturally occuring context, analyzing the experiences as part of a complex temporal, sociocultural, and geographic whole, using the investigator as research instrument, and reporting the data in stories or narratives (Schwandt, 1990). These are significant contrasts to the traditional approach to critical incidents where researcher objectivity is stressed and where context, while also important, is treated as a variable to be overcome or as a limitation of the study. In addition, in the traditional approach, the intent is not to see the behavior from within the individual's meaning perspective, but rather to count incidences of behavior to determine patterns and norms. What is significant to the approach we describe here is that one is still able to count behaviors and to detect patterns, but also to develop rich narratives of critical incidents that capture both context and meaning from the perspective of the respondents.

Ellinger's (1997) use of the Critical Incident Technique to classify and develop a behaviorally grounded set of role dimensions for managers who perceive themselves to be facilitators of learning within the context of learning organizations adhered to the rigors of Flanagan's method, but incorporated a constructivist approach. Ellinger extended the focus of the critical incident technique by developing an interview protocol which integrated the traditional behavioral component but also included elements from Figure 1. Figure 1 offers Marsick and Watkins' (1990) model of informal and incidental learning. It is clear that the Flanagan approach will only enable researchers to determine the learning strategies and behaviors. A constructivist approach such as that used by Ellinger enables the researcher to look at themes among the beliefs, attributions, and filters which shape the learning as well as those elements in the context which affect what is paid attention to, what is salient, to the learner. The intent of this approach was to reveal the richness of participants experiences and a deeper level of understanding about the behaviors that formed the role dimensions of the manager as a facilitator of learning by including questions that probed for data in these other areas.

Figure 1. Informal and Incidental Learning



The following example illustrates how a constructivist approach to critical incident data collection and data analysis amplifies our understanding of the behavior as a function of individual action in an organizational context. From Ellinger's (1997) study, a portion of a critical incident interview transcript is depicted. The purpose of this interview was to solicit effective and ineffective critical incidents in which this manager, M9, perceived himself to be a facilitator of learning for one of his employees. The incident revolved around his decision to send an employee to an assessment center.

M9: ....I'll start with one [incident] and it's regarding coaching ..and an individual who I've worked with for several years now and really started some developmental work with that person .. we had sent that particular person to an assessment center and the cost of that assessment is quite high but it's also a very effective tool to use and that person was ..concerned especially coming out of the {area within the company} function which we do that we were spending too much money to learn something like that but at least by her letting me know where she was coming from it helped me to understand that she felt like we were making... an inappropriate investment and what I did at that time was to really sit down with her and really discuss with her what the investment was that we were making and that the investment was for her specifically and how that investment would benefit both her and the company.

M9: .... the reason it was coaching because of the position that this person has in {our area} and because she {is} so conscious of the financial aspects of the position that the thoughts of that person are more bottom line oriented and sometimes not really bottom line oriented but low expenses possible oriented and that was something that I had already been talking to that person about anyway and trying to get that person to realize that even though it costs some money that it should be a great investment in the long term so I think it was a combination of both developing a development plan itself and coaching ..trying to get that person to overcome the paradigm of the box that that person was in and not think that every time you spend money that it is an expenditure but to think about it as an investment

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AE: ....would you classify this as an effective example of you intervening in this situation?

M9: Yeah...I think it was a successful example..I think at the time that we started this process and I don't think that that really came up through the interview process that this particular individual was in danger of leaving the company one way or the other, one from her own either she herself might have made the decision to leave because she didn't...couldn't cope with some of the changes that were going on in the business or it could have been a decision that I might have had to have made...and it's been successful because she's been able to open her mind up to a broader level of thinking and she's much more comfortable in the position that she has now and she thinks...she sees things much [more] clearly now even though they are somewhat ambiguous sometimes and she's more ready to accept ambiguity.

AE: OK and then when you look back at this situation, did you have any assumptions, beliefs or values that may have affected the way you responded?

M9: ...Well, I guess the assumption that I had was that if something wasn't done she wouldn't be here in the long term..the value that I had had was that I believed that she was a person that would be a good contributor to the company and I thought it was appropriate to try to help through that situation...

This portion of the interview presented above does uncover specific behaviors, the actions or set of actions that the manager performs in this situation, which is the primary component of the critical incident technique as outlined by Flanagan (1954). However, by extending the depth of the questioning around the incident to include elements from the model in Figure 1, we develop a much richer portrait of why the manager executes the behavior, the beliefs that drive his behavior and the respective outcomes for the employee and the manager. Were we to focus exclusively on behavior, this incident would merely show that a manager sent an employee to an assessment center and possibly add that he also did a little coaching around short and long term investments. Instead, the transcript illustrates much more about this manager's concept of his role as a developer of his employee.

In a contrasting example, Yukl (1981) and his colleagues completed a four-year research program to identify meaningful categories of leadership behavior. A sample of critical incidents that were provided by subordinates from one study were categorized as Training-Coaching in their behaviorally grounded taxonomy follow:

> The sales manager went out on sales calls with a new salesman last week to provide instruction and advice (p. 123).
>
> My boss asked me to attend an outside course at the company's expense and said I could leave early on the days it was to be held (p. 123).

Yukl's (1981) examples of behavioral incidents are reported from the perspective of the managers' subordinates, and the triggers, consequences, and meanings behind these behaviors are not captured. The integration of the elements presented in Figure 1 allows the researcher to develop a more comprehensive interview protocol to gather data which extends beyond the reporting of actual behaviors and the constructivist approach encourages a different approach to data collection, analysis, and reporting.

Contribution to the Field of HRD

The enhancements to this method may provide researchers within the field of human resource development the opportunity to design studies and collect data that enable them to understand the mental models and rationale that guide behaviors, the environmental factors that influence behaviors, and resulting outcomes associated with specific behaviors in addition to the actual behaviors that are described and collected. With this more holistic picture of both the meanings people assign to their actions as well as their specific and critical actions, we can more effectively intervene to affect behavior.

References

Andersson, B., & Nilsson, S. (1964). Studies in the reliability and validity of the critical incident technique. Journal of Applied Psychology, 48(6), 398-403.

Bitner, M. J., Booms, B. M., & Tetreault, M. S. (1990). The service encounter: Diagnosing favorable and unfavorable incidents. Journal of Marketing, 54(1), 71-84.

Bitner, M. J., Nyquist, J. D., & Booms, B. H. (1985). The critical incident technique as a technique for analyzing the service encounter. In T. M. Bloch, G. D. Upah, & V. A. Zeithaml (Eds.), Services marketing in a changing environment. Chicago, IL: American Marketing Association.

Campbell, J. P., Dunnette, M. D., Lawler, E. E., III, & Weick, K. E., Jr. (1970). Managerial behavior, performance, and effectiveness. New York, NY: McGraw-Hill Book Company.

Clawson, V. (1992). The role of the facilitator in computer supported environments. Unpublished doctoral dissertation, Walden University.

Copas, E. M. (1984). Critical requirements for cooperating teachers. Journal of Teacher Education, 35(6), 49-54.

Edvardsson, B. (1992). Service breakdowns: A study of critical incidents in an airline. International Journal of Service Industry Management, 3(4), 17-29.

Ellinger, A. M. (1997). Managers as facilitators of learning in learning organizations. Unpublished doctoral dissertation, The University of Georgia, Athens.

Fivars, G. (1980). The critical incident technique: A bibliography. Palo Alto, CA: American Institutes for Research in the Behavioral Sciences. (ERIC Document Reproduction Service No. ED 195681).

Flanagan, J. C. (1954). The critical incident technique. Psychological Bulletin, 51(4), 327-358.

Gilbert, D., & Morris, L. (1995). The usefulness of critical incident technique analysis in isolating travel satisfactions. International Journal of Contemporary Hospitality Management, 7(4), v-vii.

Hackett, G., Betz, N. E., & Doty, M. S. (1985). The development of a taxonomy of career competencies for professional women. Sex Roles, 12(3-4), 393-409.

Hunt, S. D. (1991). Modern marketing theory: Critical issues in the philosophy of marketing science. Cincinnati, OH: South-Western Publishing Company.

Kerlinger, F. N. (1986). Foundations of Behavioral Research (3rd ed.). New York, NY: Harcourt Brace Jovanovich College Publishers.

Leles, S. (1968). Using the critical incidents technique to develop a theory of educational professionalism: An exploratory study. Journal of Teacher Education, 19(1), 59-69.

Lincoln, Y. (1997) presentation at the American Educational Research Association annual meeting.

Marsick, V. and Watkins, K. (1990). Informal and incidental learning in the workplace. London: Routledge.

Schwandt, T. (1990) Paths to inquiry in the social disciplines: Scientific, constructivist, and critical theory methodologies, in Guba, E. (Editor). The paradigm dialog. Newbury Park, CA: Sage.

Yukl, G. A. (1981). Leadership in organizations. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Yukl, G. A. (1989a). Leadership in organizations (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall, Inc.

Yukl, G. (1989b). Managerial leadership: A review of theory and research. Journal of Management, 15(2), 251-289.

Yukl, G. (1994). Leadership in organizations (3rd ed.). Englewood Cliffs, NJ:

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A Feminist Approach to HRD Research

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This paper challenges HRD researchers to apply a feminist perspective to critiquing and conducting research. Feminist research values and assumptions are defined. A framework for evaluating and conducting research according to feminist principles is suggested. A brief critique of contemporary HRD research is provided. The paper challenges HRD researchers to challenge assumptions, work for social and political change, and promote alternative research designs.

Creating new knowledge is of vital importance to both HRD practitioners and researchers. As an emerging field, HRD is in the process of defining itself as a discipline. Yet, voices are missing from the discourse, and there has been little critical assessment of the field. This paper proposes a different perspective for conducting responsible HRD research and practice.

Missing Voices Like most other social institutions, the process of knowledge creation and dissemination has historically been the province of white men. Women's experience and knowledge has been traditionally excluded or overlooked in social science research. The scientific method has received wide application and is often viewed as *the* valid means of creating knowledge. While the positivist approach has immense value in creating knowledge, there are questions that it cannot answer suitably. Additionally, the positivist method embraces an overt objective to neutralize context and avoid relationships between the researcher and the researched. Westkott, in a 1979 feminist critique of the social sciences, noted that women's invisibility in all disciplines has been a recurring theme of feminist criticism. While there have been improvements, this still seems to be the case. Allen and Baber argue that, "Traditional science has been used to exploit women's labor and mystify women's experience, so feminists must seek methods that more accurately and comprehensively reveal women's lives" (1992, p. 2). Nicolson (1997) suggests that traditional research methods both render women invisible and remove them from the context of their lives.

Critical Assessment During the last two decades, feminist social scientists, particularly from the fields of psychology and sociology, have critiqued the research process. Mednick (1991) charges psychology research with omissions including: inattention to the influence of cultural institutions, lack of cross-disciplinary borrowing, and reductionism at the expense of field and naturalistic research. Nicolson argues that, "Women experience subordination in a number of ways throughout their lives, and their needs are clearly at odds with the aims, practice and rhetoric of mainstream academic psychology which seeks to establish norms for human behavior based upon the white, middle-class bourgeois male" (1997, p. 248). Acker, Barry, and Esseveld (1983) argue that:

> Exploration, in our usage, means an open and critical process in which all the intellectual tools we have inherited from a male dominated intellectual tradition are brought into question, including ideas about the basic nature of human being, the nature of social life, the taken-for-granted world-view of traditional science, what concepts and questions might help to illuminate our shared condition and how we should go about developing such knowledge (p. 425).

To move HRD forward as a discipline requires that the assumptions underlying research be surfaced and research practices be challenged.

A New Vision The goal of this paper is to apply a different lens to the HRD research process. The lens is a feminist perspective. There are many types of feminism and may kinds of research. Feminist research views knowledge as evolving, interactively created and tested through experience. Bologh (in Reinharz, 1992) suggests that its concern lies in identifying

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feminist research methods, and distinguishing them from other research methods. She also emphasizes that feminist researchers differ from one another. Acker, Barry, and Esseveld recognize that traditional social science has relegated women to the periphery and misrepresented their lives. They consequently suggest that "a radical rebeginning is needed in feminist research" (1983, p. 424). This paper will define feminist research, present a brief feminist critique of HRD research, and discuss the potential of feminist research to contribute to the future research and practice of HRD.

Theoretical Framework: Defining Feminist Research

This section provides a simplistic definition of "feminist," identifies the values and assumptions underlying feminist research, and outlines a framework for conducting feminist research.

Defining "Feminist" Entertaining the many types of feminism is beyond the scope of this paper. A feminist--at the most simplistic level--is a person who seeks economic, social and political equality between the sexes. Feminists participate in and/or support organized activity to advance women's rights and interests. Acker, Barry, and Esseveld (1983) define feminists as engaged in: acknowledging the exploitation, devaluation and often oppression of women; making a commitment to changing the condition of women; and adopting a critical perspective toward dominant intellectual traditions that have ignored and /or justified women's oppression.

Values And Assumptions Underlying Feminist Research Is there a particular feminist research method? No. There is, however, a feminist *approach* to research. The feminist approach is characterized by specific values, grounded in assumption testing, and committed to social change.

Feminist Research Values Feminist researchers use methods similar to other researchers (Harding, 1987; Peplau & Conrad, 1989). Subjectivity, personal experience, social context, and relationship between the researcher and researched are valued in feminist research. Harding observes:

> A closer examination of the full range of feminist social analyses reveals that often it is not exactly alternative methods that are responsible for what is significant about their research. Instead, we can see in this work alternative origins of problematic, explanatory hypotheses and evidence, alternative purpose of inquiry, and a new prescription for the appropriate relationship between the inquirer and her/his subject of inquiry (1987, p. vii).

What makes feminist research unique is "defining women's experiences as suitable problems and sources of answers; designing research *for* women; and locating both researcher and researched on the same critical plane" (Coyner, 1988-1989, p. 291). "The feminist goal is to do research that is *for* women rather than *about* women" (Allen & Barber, 1992, p. 9). Lott's (1991) feminist research themes incorporate promoting women's interests, human welfare and the health and integrity of psychology as a scientific field. While mindful of the controversy and debate permeating research critique, she has identified the following themes as important to recognize in designing feminist research:

- Science is not value-free.
- Sizable gender difference in behaviors and abilities have been assumed with inadequate evidence; these assumptions support a status quo of unequal opportunity and power.
- Gender is a cultural construction and an ongoing process.
- Women's lives provide rich sources of information for study; research must focus on human beings, not just men, college students, heterosexuals, or middle-class European Americans.
- Gender is not just a participant characteristic but a significant stimulus variable.
- Psychological research always has social implications which should be recognized and stated openly; feminist objectives include and equitable society.
- There is always a relationship between the researcher and the persons researched.

- Multiple methods yield a wide range of information.
- There is always a social, political, and historical context to be considered in understanding the origin of research questions and in interpreting data (pp. 508-510).

Assumption Testing Bologh asserts that feminist researchers "question and challenge the implicit male perspective of the dominant paradigms, ethnological strictures, and theoretical assumptions of the various disciplines" (1984, p. 388). Feminist research questions the assumptions behind research from the question posed to the implications drawn. U.S. sociologist Mednick (1991) demands that feminist research critique how assumptions about women's true nature affect the method, concepts, and application of knowledge. She challenges researchers to investigate topics that have been neglected because of bias about women and to consider how academic disciplines are affected by neglecting women and other oppressed groups in research.

Relationships between the Researcher and the Researched Acker, Barry, and Esseveld note that "a feminist methodology must, therefore, deal with the issues of objectivity in social science and, in the process, deal also with the issue of the relationship between the researcher and the researched" (1983, p. 425). Feminist researchers acknowledge that both the researcher and the researched are sources of data, both may be changed due to the research, and the relationship between the two may be an important data source. Feminists strive not to exploit research participants, but rather to make the process liberating.

Social Change Feminist research can be regarded as systemic, as it attempts to analyze and influence social phenomenon on a large scale. Reinharz (1992) notes that feminist research is connected to both social change and social policy questions. Further, feminist research is concerned with social justice, not only for women, but for other oppressed groups in society. Lott (1991) identified four basic assumptions and values shared among feminist psychologists. They include:

1. Recognition of the patriarchal, sexist nature of most aspects of contemporary life and social institutions.
2. Recognition of the negative consequences of gender inequities in power.
3. Focus on the entire range of women's experiences.
4. Efforts for change in alliance with others to eliminate barriers to resources based on gender, ethnicity, class, and other social categories (p. 508).

Feminists work to change the asymmetrical power relationships in organizations and society.

A Framework For Conducting Feminist Research Worell (1996) notes that feminist psychologists introduced a dialogue that challenged prevailing structures of knowledge creation. Worell and Etaugh (1994), synthesized feminist theory and research in psychology and other disciplines to establish "Themes and Sample Variations in Feminist Research." Worell adapted the list and suggests that feminist research:

1. Challenges traditional scientific inquiry.
2. Focuses on the experiences and lives of women.
3. Considers asymmetrical power arrangements
4. Recognizes gender as an essential category of analysis
5. Attends to language and the power to "name"
6. Promotes social activism and societal change (1996, p. 476)

These themes will be applied in a critique of HRD research. The critique presented in this paper is preliminary. A more exhaustive critique of AHRD proceedings and HRD research articles is underway.

Feminist Critique of HRD Research

Feminist criticism seeks to end oppression by critically evaluating a phenomenon (such as research), challenging underlying assumptions, and proposing alternatives. Feminist criticism questions perspectives that censure or ignore groups in society. Feminist research is concerned not only with women, but also with the oppression of all people. Fine (1985) suggests that feminist researchers should analyze samples, contexts studied, outcomes measured and conclusions drawn. Lykes and Stewart (1986) observe that "Methodology emerges as the gatekeeper of mainstream psychological research, the point of most resistance and least change" (p. 408). McHugh, Koeske, and Frieze (1986) note three major types of barriers to sex-fair research: Excessive confidence in traditional methods, bias in explanatory systems, and inappropriate conceptualization and operationalization. Denmark, Russo, Frieze, & Sechzer (1988) recommend that gender bias be eliminated at all stages of research including: question formulation, research design, data analysis and interpretation and conclusion formation. This section provides a brief critique of HRD research based on question formulation, research design, and Worell's (1996) framework.

Question Formulation Research questions have traditionally been conceptualized without consideration of women (Fine, 1985; Lykes & Stewart, 1986; Unger, 1983). A quick reading of HRD research reveals an agenda driven by management interests focused primarily on learning and performance. Learning and performance are vitally important to HRD research. The research question formulation, however, overlooks the impact of power, oppression, and organizational relationships on learning and performance.

Leimbach and Baldwin (1997) identify the characteristics of effective HRD research as being customer driven, linked to value creation, short in duration, and rigorous. While Leimbach and Baldwin's characteristics are important in HRD research, there are several omissions. There is no reference to addressing issues related to women and minorities, diversity, power relationships, social context or social and political change. Employees are not even mentioned in the characteristics. Although organization power holders control the demand for HRD services and are important in the HRD system, they are not the only members. Organizations participate in society and impact employees, communities and the environment. HRD's challenge related to question formulation is to take a more systemic focus that considers all members of a social system, and topics beyond performance and learning.

Research Design A wide variety of research designs is used in HRD. However, the positivist methodology is favored among many researchers. Holton and Burnett observe, "Quantitative methods and the scientific method are the foundation of modern science. . . .This approach has a rich tradition and has contributed a substantial portion of the knowledge in human resource development" (1997, p. 65). Feminist research proposes expanding the methods and voices of knowledge creation.

Sample Populations As in question formulation, HRD research is biased in sample selection. There tends to be an executive/managerial focus. This orientation is not surprising since these groups posses organizational power, control resources, and stand to benefit from research. Two recent books have dealt with HRD research. Each book has either provided abstracts or full text of what the authors consider to be exemplary HRD research (Russ-Eft, Preskill, & Sleezer, 1997; Swanson & Holton, 1997). Neither book identifies studies that investigated women as a unit of analysis. Women are absent in problem formulation, research design, data analysis and future implications. Biased selection such as this serves to exclude women, minorities and employee groups with less power in organizations. It also prevents HRD researchers and practitioners from gaining a full understanding of the organizational context.

Methodology Unger (1983), asserts that research is affected by embedded models of reality that impact question selection, causal factors hypothesized, and data interpretation. She accuses social scientists of working to "sustain the illusion that knowledge is abstract and value-free" (p. 13). This perspective excludes many voices from the knowledge creation process, and in turn, maintains the existing power relationships and interests of the power holders in society. The methodology is not under Unger's critique as much as the unawareness of the implications of the epistemological commitments made through non-critical selection of research tools. Feminist research advocates the use of multiple methods, instead of over reliance on experimental, quantitative methods.

Data Analysis Although HRD research populations regularly include women and minorities, data analysis often fails to address gender or oppressed status as an important unit of investigation. Further, the social and political contexts are often controlled or ignored in traditional research. Failure to capture richness, context and multiple perspectives in analysis is another feminist criticism of social science research. Unger critiques the positivist empiricist research model as it "restrict[ing] analysis to a few clearly observable units of behavior in order to avoid imposing one's own beliefs upon the organism's studied" (1983, pp. 10-11). The challenge for HRD researchers is to more comprehensively analyze data. This will promote learning about women, oppressed groups and social context.

Interpretation and Conclusion Formation HRD researchers need to take their conclusions a step further when considering findings. How do the findings impact women and other oppressed groups? What are the implications for organizational or social change?

A Brief Critique of HRD Research McLean and Russ-Eft identified nine "examples of excellent HRD research" in the 1997 *HRD Research Handbook*. These studies were published between 1992-1995. McLean and Russ-Eft established that the studies selected were not "perfect," and emphasized that they represented a wide array of topics and methodologies. These "excellent" studies addressed issues including: continuous quality improvement, cross-cultural human resource development, performance feedback, organization learning, behavioral modeling, interpersonal-skills training, computer-based interventions, transfer of training, performance prediction, team building, learning, design, performance and development. Two of the nine studies sampled business students. The sample populations for the others included managers, team members and training participants. By analyzing this small selection of studies against Worell's (1996) six points framing feminist research we can establish that: (1) Some of the studies challenged traditional scientific inquiry (Brooks,1994; DiBella,1993; and Rowe, 1995). (2) None of the studies focused on the experiences and lives of women. (3) Asymmetrical power arrangements were considered by one study (Brooks, 1994). (4) Gender was not recognized as an essential category of analysis in any of the studies, not even those with a significant population of women. (5) Worell and Etaugh (1994) identify "attending to language and the power to name" as the willingness to address undiscussables such as sexual harassment, discrimination, or violence against women. None of the studies ventured into this area. (6) Finally, none of the studies promoted social activism or societal change.

Russ-Eft, Preskill and Sleezer co-authored the 1997 book *Human Resource Development Review: Research and Implications*. The studies highlighted in this book were published between 1990 and 1995. They overlap significantly with McLean and Russ-Eft's selection of "excellent" studies. Russ-Eft, Preskill and Sleezer selected studies based on the following characteristics:

- A well-grounded theoretical framework
- An appropriate mode of inquiry
- A systematic approach to research
- A well-executed methodology
- A well-grounded analysis and interpretation
- An original contribution to the field
- A clear and well-organized written presentation
- An appeal to a large audience

This collection of studies is organized according to individual learning and performance, team learning and performance, and organizational learning and performance. This structure situates the research inquiry solidly in the realm of corporate settings with a focus on organizational performance and learning. There are no studies related to women in this collection. Two of the fifteen studies in this book address power in organizations. There are also articles related to cross-cultural issues. A striking characteristic of this collection is the diversity of qualitative research designs.

Admittedly, this brief critique does not capture the vast amount of HRD research. Yet, considering that these are the most comprehensive, current guides to HRD research, the omissions are startling. Indeed, the books provide useful models of research and fill a previously vacant niche in HRD literature. The research books stop short of truly challenging the assumptions HRD researchers bring to their studies. They fail to include many HRD contexts beyond industrial, corporate organizations. Diverse voices are not heard. A feminist research perspective provides the framework to represent diversity in research and explore issues beneath the surface of organization performance and learning.

The Challenge of Feminist HRD Research

Just as there are many feminisms, so too are there many types of feminist research. The purpose of this paper is not to argue for one feminist methodology, but rather to challenge HRD researchers to approach the knowledge creation process more critically. DeVault noted that, "the dilemma for the feminist scholar, always, is to find ways of working within some disciplinary tradition while aiming at an intellectual revolution that will transform the tradition" (in Burke, 1978, p. 855). In the spirit of DeVault, this section highlights the possibilities feminist research provides including: challenging assumptions, working for social and political change, and promoting alternative research designs.

Challenging Assumptions Feminist research provides a framework for alternative knowledge creation. Feminist researchers challenge the traditional roles of researcher and subject. Feminist researchers engage in criticism of nonfeminist scholarship and challenge such scholars with working toward scholarship that is guided by feminist theory. Harding (1987) suggests that feminist analyses add three elements to the knowledge base. The first is valuing women's experiences as new empirical and theoretical resources. Through this inquiry, women's experience becomes a resource for social analysis. Another contribution is research for women. Here the objective is to provide explanations for women about social phenomena that women both want and need. The third attribute is providing a new subject matter of inquiry by locating the researcher in the same critical plane as the overt subject matter. In essence this involves women studying themselves.

Asking new questions is an important role in critiquing existent HRD research and in creating future studies (McHugh, Koeske, and Frieze, 1986). Strudler Wallston (1981) notes that asking questions is undervalued in the research process. HRD researchers can apply action learning to research by asking new questions to test and surface their assumptions. What are the benefits of feminist research? The risks? How critical are HRD researchers of their methods? How do we integrate multiple voices into HRD research? How does research reproduce systems of oppression versus challenge them? What is the responsibility of HRD researchers to evaluate their practice? What impact do omissions in research have on HRD theory and practice?

Working for Social and Political Change Feminist criticism is a "mode of praxis....[Its] point is to change the world" (Schweickart, 1986,p. 38). The social change agenda is overt among feminist researchers. HRD researchers can benefit by stepping back and assessing how or if HRD research contributes to social and political change, versus reinforcing the status quo. Feminist researchers are interested in how new knowledge can equalize asymmetrical power relationships. Research in the areas of team dynamics and organizational learning hold great promise for expanding feminist research in HRD.

Promoting Alternative Research Designs Reinharz (1992) offers a framework for feminist research. Like Harding (1987), she also emphasizes that feminism is a perspective, not a method. "Feminist research" is less about a particular method, and more concerned with how we ask questions, what agendas we pursue and whether or not change is facilitated. Feminists embrace all modes of inquiry including well-known research methods such as: interviews, ethnography, survey research and statistical analysis, experimental studies, cross-cultural studies, oral history, content analysis, case studies, and action research. Feminists also apply uniquely feminist methods (see Reinharz, 1992) such as: consciousness raising, group diaries, scale creation, drama, genealogy and network tracing, multiple narrative, conversation/dialogue, intuition, identification, personal experience, structured conceptualization, photography, and self-interviewing.

Worell (1991) advocates greater diversity among research populations including analysis based on gender, race, ethnicity, class, and status. Even research done on women lacks diversity. Mednick points out that "It seems that we are aware that we are studying only majority-group middle class women, but we do not know how to get out of the box" (1991, p. 616). She argues that this neglect is damaging the conceptual development and research practice of the field and must be corrected.

While there are challenges to doing feminist research, Lott (1991, pp. 514-515) predicts that the feminist perspective will function similarly to systems theory as a lens through which to view and critique research and theory. She predicts that the future will yield:

1. A reduction in implicit bias with a tendency toward thinking differently about research with a greater willingness to share undiscussable assumptions.
2. Growing acceptance of multiple methods for discovering knowledge
3. Increased interest in equality and social justice.
4. The use of multiple research methods in multiple contexts
5. Gender will be recognized as an important level of analysis.

Conclusion

This paper defined feminist research, evaluated HRD research, and proposed some tactics for conducting feminist HRD research. HRD is an important and emerging field with a rich tradition of research. Swanson (1997) charges that, "Atheoretical practice is practice that occurs without the guidance of theory" (p. 4). Swanson makes an important point. The feminist question is, "Theory for whom, by whom?" This is a relevant issue throughout the research process. As researchers, we have a responsibility to critically evaluate our questions, methods and findings. We have an additional responsibility of assessing the impact HRD research has on performance, learning, employee well-being and social welfare. Is HRD research increasing opportunities for women and minorities in organizations? Is the work of HRD impacting the environment in a positive fashion? Whose voice is being heard in the scholarly discourse? The benefits of a feminist perspective include that it is emancipatory in nature, concerned with issues of social justice not only for women, but also for oppressed minorities and social groups. The feminist perspective is change-oriented, seeking to equalize power relations that often lead to oppression of various groups in society. The feminist approach offers HRD, as a relatively new field, the opportunity to apply multiple, socially responsible approaches to increasing the knowledge base.

References

Acker, J., Barry, K., & Esseveld, J. (1983). Objectivity and truth: Problems in doing feminist research. *Women's Studies International Forum, 6*(4), 423-435.

Allen, K. R., & Baber, K. M. (1992). Ethical and epistemological tensions in applying a postmodern perspective to feminist research. *Psychology of Women Quarterly, 16*, 1-15.

Bologh, R. W. (1984). Feminist theorizing and moral reasoning: On difference and dialectic. In American Sociological Association, *Sociological Theory*. San Francisco: Jossey-Bass, 373-393.

Brooks, A. K. (1994). Power and the production of knowledge: Collective team learning in work organizations. *Human Resource Development Quarterly, 5*(3), 213-235.

Burke, C. G. (1978). Report from Paris: Women's writing and the women's movement. *Signs: Journal of Women in Culture and Society, 3*(4), 843-855.

Coyner, S. (1988-1989). Feminist theory in research and teaching. *National Women's Studies Association Journal, 1*, 290-296.

Denmark, F., Russo, N. F., Frieze, I. H., & Sechzer, J. A. (1988). Guidelines for avoiding sexism in psychological research: Report of the ad hoc committee on nonsexist research. *American Psychologist, 43*(7), 582-585.

DiBella, A. J. (1993). The role of assumptions in implementing management practices across cultural boundaries. *Journal of Applied Behavioral Science, 29*(3), 311-327.

Fine, M. (1985). Reflections on a feminist psychology of women: Paradoxes and prospects. *Psychology of Women Quarterly, 9*, 167-183.

Harding, S. (Ed). (1987). *Feminism & methodology: Social science issues.* Bloomington: Indiana University Press.

Holton, E. F., & Burnett, M. F. (1997). Quantitative research methods. In R. A. Swanson & E. F. Holton, III (Eds.), *Human resource development research handbook: Linking research and practice*, pp. 65-87. San Francisco: Berrett-Koehler.

Leimbach, M. P., & Baldwin, T. T. (1997). How research contributes to the HRD value chain. In R. A. Swanson & E. F. Holton, III (Eds.), *Human resource development research handbook: Linking research and practice*, pp. 21-46. San Francisco: Berrett-Koehler.

Lott, B. (1991). Social psychology: Humanist roots and feminist future. *Psychology of Women Quarterly, 15,* 505-519.

Lykes, M. B., & Stewart, A. J. (1986). Evaluating the feminist challenge to research in personality and social psychology: 1963-1983. *Psychology of Women Quarterly, 10,* 393-412.

McHugh, M. C., Koeske, R. D., & Frieze, I. H. (August, 1986). Issues to consider in conducting nonsexist psychological research: A guide for researchers. *American Psychologist,* 879-890.

McLean, G. M. & Russ-Eft, D. (1997). Examples of excellent HRD research. In R. A. Swanson & E. F. Holton, III (Eds.), *Human resource development research handbook: Linking research and practice*, pp. 161-182. San Francisco: Berrett-Koehler.

Mednick, M. T. (1991). Currents and futures in American feminist psychology: State of the art revisited. *Psychology of Women Quarterly, 15,* 611-621.

Nicolson, P. (1997). Feminist social psychology: A re-view. *Feminism & Psychology, 7*(2), 248-254.

Peplau, L. A., & Conrad, E. (1989). Beyond nonsexist research: The perils of feminist methods in psychology. *Psychology of Women Quarterly, 13,* 379-400.

Reinharz, S. (1992). *Feminist methods in social research.* New York: Oxford University Press.

Rowe, A. L. & Cooke, N. J. (1995). Measuring mental models: Choosing the right tools for the job. *Human Resource Development Quarterly, 6*(3), 243-255.

Russ-Eft, D. Preskill, H., & Sleezer, C. (1997). *Human resource development review: Research and Implications.* Thousand Oaks: Sage.

Schweickart, P. (1986). Reading ourselves: Toward a feminist theory of reading. In E. Flyn and P. Schweickart (Eds.), *Gender and reading: Essays on readers, texts, and contexts* (pp. 31-62). Baltimore: Johns Hopkins University Press.

Strudler Wallston, B. (1981). What are the questions in psychology of women? A feminist approach to research. *Psychology of Women Quarterly, 5*(4), 597-617.

Swanson, R. A. (1997). HRD research: Don't go to work without it! In R. A. Swanson & E. F. Holton, III (Eds.), *Human resource development research handbook: Linking research and practice*, pp. 3-20. San Francisco: Berrett-Koehler.

Swanson, R. A. & Holton, E. F. (1997). *Human resource development research handbook: Linking research and practice.* San Francisco: Berrett-Koehler.

Unger, R. K. (1983). Through the looking glass: No wonderland yet! (The reciprocal relationship between methodology and models of reality). *Psychology of Women Quarterly, 8*(1), 9-32.

Westkott, M. (1979). Feminist criticism of the social sciences. *Harvard Educational Review, 49*(4), 422-430.

Worell, J. (1996). Opening doors to feminist research. *Psychology of Women Quarterly, 20, 469*-485.

Worell, J. (1991). Progress and prospect. *Psychology of Women Quarterly, 15,* 1-6.

Worell, J. & Etaugh, C. (1994). Transforming theory and research with women. *Psychology of Women Quarterly, 18,* 443-450.

Using Performance Analysis for Training in an Organization Implementing ISO-9000 Manufacturing Practices: A Case Study

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Efforts to improve individual and organizational performance begin with analysis of needs. In theory and practice this statement is true; however, the connection between theory and practice is not always clear. This case study examined the use of a theory-based model, the Performance Analysis for Training (PAT) Model, for analyzing performance needs within an organization that was implementing ISO-9000 processes.

Analysis of performance needs is the usual starting point for HRD and training processes. However, the literature reports few systematic studies that describe actual assessment practices in the workplace (Lewis & Bjorkquist, 1992; Tannenbaum & Yukl, 1992). This case study extends previous research by examining the use of the theory-based Performance Analysis for Training (PAT) Model to analyze the needs of an organization implementing ISO-9000.

Problem Statement and Theoretical Framework

The process of analyzing needs has been described in literature as needs assessment, needs analysis, front-end analysis, and performance analysis (Rossett, 1992). While the particular meanings of these terms have been debated (Moseley & Heaney 1994) each identifies a similar intent: to ascertain performance improvement opportunities or problems. Practitioners have available many models that include or detail processes for analyzing needs (e.g., Goldstein, 1986); Gupta, (1996); Sleezer, (1991); Swanson, 1994). The expectation is that the process of determining and addressing performance needs will lead to benefits such as increased productivity, profit, satisfaction, and innovation.

In contrast to the many models and theories, little is known about the actual approaches taken by expert HRD practitioners to solve performance-related problems (Lewis and Bjorkquist, 1992). Sleezer and Maile's (1997) cross-case study of needs assessment showed that HRD professionals used diverse practices and concluded by calling for additional research and model-building aimed at practical needs assessment tools. Hatcher and Ward (1997) stated that because of the rapidity of organizational change, performance improvement professionals need innovative ways to analyze issues affecting performance. Gill (1995) indicated that performance analysis must not lose sight of the firm's long range goal of survival and growth and must "link training events and outcomes clearly and explicitly to business needs and strategic goals" (p.30).

One business need faced in many organizations today involves implementing quality management systems for continuous improvement processes. The International Standards Organization (ISO) 9000 series provides a well-accepted base to build an improvement process and has already certified tens of thousands of organizational operations to standards (Harrington, 1995). The standards require procedures for identifying training needs and providing training to meet those needs. Also, assessment can be useful in defining, documenting, and communicating an organization's quality policy.

One theory base needs assessment model that has been tested in practice is the Performance Analysis for Training (PAT) model. Directed toward identifying the organization's performance needs that should be addressed with training, the model includes three components: (a) a

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conceptual framework with three elements that affect decisions about training needs, (b) a list of the phases and steps involved in the process of determining training needs, and (c) a set of worksheets that detail the phases, steps, and activities involved in determining training needs in an organization (Sleezer, 1991). The PAT model's premise is that the process and results of a performance analysis are influenced by the organization's characteristics, the decision maker's characteristics, and the analyst's characteristics. Training needs are perceived, negotiated, and prioritized through interaction of the decision maker, analyst, and organization characteristics. Studies testing the PAT model in practice have targeted a financial services firm (Sleezer, 1991), a vehicle manufacturer (Sleezer, 1996), a chemical manufacturer (1995), and a university school of veterinary medicine (Knorr, 1997). These studies have provided support for the PAT model's premise and identified adaptations to the model.

Research Methodology

This case study extends previous research by examining the PAT Model's implementation within a particular situation, an organization that was implementing ISO-9000 processes. With this research method, each case that documents the application of the PAT Model in a situation with distinct organization, decision maker, and analyst characteristics tests the model and its theoretical base.

The five components of case study research identified by Yin (1989) formed the framework for the study. They are: a) the study questions, b) the propositions, c) the units of analysis, d) the logic linking the data to the propositions, and e) the criteria for interpreting the findings (Yin, 1989). According to Eisenhardt (1989), Lee (1985), and Yin (1989), if cases are purposefully selected and multiple cases confirm predictions, then the propositions are supported. However, if the case contradicts the predictions in some way, then the initial predictions must be revisited and retested (Yin, 1989).

Case Study Components. This section provides details on the five case study components.

The Study's Questions and Propositions

This study analyzed the relationship between the theory and practice of performance analysis by focusing on two questions and two propositions.

Study Question #1 and Proposition. The first study question asked: Will using the PAT Model in an organization that is implementing ISO-9000 processes produce the following predicted results: a) involve the organization decision maker(s) in the training process, b) provide the organization decision maker(s) with accurate and sufficient information for making determinations about the contributions that training should make to the performance needs of the organization, and c) provide the organization decision maker(s) with information useful for designing, developing, implementing, and evaluating training?

The proposition analyzed while answering this question focused on the first component of the PAT Model: The process of framing the performance needs and the resulting outcomes will be influenced by three elements—organization characteristics, decision maker characteristics, and analyst characteristics—and their interactions.

Study Question #2 and Proposition. The second study question asked: What is the correspondence between the actual process used for the performance analysis and the process outlined in the PAT Model?

The proposition analyzed during the process of answering the second study question was that the three levels of analysis referenced in the PAT Model—organization analysis, work behavior analysis, and individual capabilities analysis—would be appropriate for analyzing performance needs in this situation. While the three-level approach has been described frequently in the literature (e.g., Goldstein, 1986; Harris & DeSimone, 1994), previous research revealed that the 3 levels of the PAT model were not always used (Sleezer, 1995).

Unit of Analysis

For this study, the unit of analysis was the entire performance analysis conducted for a manufacturing organization. The organization was selected as a research site because decision makers from the organization had approached the analyst to assess the training needs associated with ISO-9000 certification. The decision makers had previously worked with the analyst and the Meridian Technology Center, a vocational education institution, on another program and had established a working relationship.

Data collection consisted of specific actions, decisions, and results of using the PAT Model. In addition to using the worksheets, the analyst kept detailed field notes and presented periodic reports to the organization's decision makers. To enhance the validity and reliability of data collection, respondent and document verification and data source triangulation were used. With respondent verification, individuals who had been interviewed or observed reviewed a summary of the event and indicated whether they concurred with the description. Data source triangulation required collecting information from people and sources at different points in time.

Logic Linking Data to the Proposition. To connect the data to the propositions, the study relied on a conceptual framework: the PAT Model. For example, the PAT worksheets were used when making decisions about the information to be gathered, the actions to be taken at each step in the process, the sources of data, and the events to record.

The data was reduced and displayed for analysis as described by Miles and Huberman, (1984). In this study, determining what to record on the PAT worksheets involved data reduction. Also, the PAT worksheets provided a well-organized and compact display of the data and allowed the analyst to view the situation clearly. The PAT worksheets, the field notes, and the reports to the organization were all used in considering the propositions and answering the research questions.

Criteria for Interpreting the Findings. The means for judging whether the research questions were answered was determined prior to initiating the project. The analyst and the decision makers agreed to work together following the performance analysis to evaluate the project's process and results related to the research questions and propositions. For this study, the decision makers reviewed the case study process and the results to assess the analyst's perceptions of the data and the evidence gathered.

Description of the Organization

The research site was a division of a worldwide manufacturer of business forms and business systems design. The division, constructed in 1966, is the largest single facility in the company's North American operations. Total employment at this site is 154 with an annual payroll of approximately $7,073,000. The division produces adhesive for the label products, dye products, business forms, and label stocks for use as repositionable stick notes, postal labels, and other related label products. In 1994, this site achieved International Standards Organization (ISO) 9000 registration, which is a worldwide standard for quality systems and business processes. Achieving and maintaining this registration required Quality Procedures that were well documented and adhered to by every employee. Ongoing audits by the Standards Organization ensured that the quality operations procedures were current and used to continuously improve production.

The project decision makers were the Plant Manager and the Chemical Department Manager. The Chemical Department Manager, the catalyst for implementing the performance analysis, had support for this project from the Plant Manager, the Environmental Manager, the Safety Administrator, and Department Managers.

The project analyst was the first author of this paper. The analyst's experience in needs assessment included graduate-level study and prior leadership in needs assessment efforts in many organizations in the service, manufacturing, and government sectors.

The context of this study is as follows: As part of IS0-9000 continuous improvement, the Chemical Department Manager decided to establish a formal orientation program for current and new operators. He expected the program to include introductions to the operating system and the production process. As a first step in establishing the orientation program, the Manager decided that it was necessary to train current operators and redesign the standard operating procedures (SOP). The Manager contacted the analyst and asked him to conduct a performance analysis to determine the critical needs for the current and new operators. After the initial interview, the analyst selected the PAT Model to guide the effort. During a subsequent meeting, the Manager and the analyst agreed to begin the project by implementing an organizational analysis and a work behavior analysis, the first two phases of the PAT Model. The Manager and the analyst decided to postpone implementing the individual capabilities analysis, the third phase of the model, until the results of the first two phases were received. Conducting the performance analysis using the PAT Model was expected to provide for the orientation program the following: 1) identification of ideal work behaviors, 2) documentation of actual work behaviors, and 3) identification of barriers to performance.

Implementing the PAT Model in the Chemical Manufacturing Department

The first phase, determining where the training emphasis should be placed, was influenced by the addition of new production operators to the organization. The analyst and the manager agreed that the training should be targeted at the production area because it had the most potential for individual and organizational performance. They also agreed that the training should support the ISO-9000 requirements and emphasize specific problems or concerns at the individual, process, and organizational levels.

Expected challenges to gathering data included time, employee access, and plant manager access. Prior to initiating the performance analysis, the analyst anticipated that time for collecting data would be limited because the research site was a functioning plant with production requirements to meet. To address this challenge, the analyst planned to interview managers, supervisors, and production employees during actual production periods where the observations and interviews were periodically interrupted by high-demand production situations.

Employee access was also anticipated as a possible concern. Production employees might feel anxious that an outside analyst was gathering information for a performance analysis and as a result provide limited access to information. To address the concern, the plant manager positioned the performance analysis as an opportunity to learn with honest and full information disclosure making the project more beneficial. He also announced that information would be grouped before being reported. This positioning made it possible to obtain detailed descriptions of employee perceptions and behaviors.

Another anticipated concern was limited access to the plant manager because of his other commitments. The strategy for addressing this issue was short, structured meetings, scheduled at the plant manager's convenience.

Implementing the first phase of the PAT Model included gathering and analyzing job descriptions, performance worksheets, projected performance goals, organizational charts, past employee orientation materials, standard operating procedures, and safety and operator training materials. Data were gathered by reviewing written records, interviewing the plant manger, area supervisors and product group managers, and by observing managers and production staff members on the job. The compiled information provided the basis for the next phase of the needs analysis, the work behavior analysis.

The PAT Model demanded the use of multiple sources of data. The information gathered from one source or individual at a given point in time was compared with information that had been gathered from other sources or individuals at points in time. Throughout the entire performance analysis, the analyst compared the newly-gathered data with the needs assessment notes and other sources of information. Questionable data was pursued to determine its accuracy and relevance.

Compilation and synthesis of the information provided the analyst with background information about the organization's situation. The compiled information also provided perceptions and other data about the production area's performance issues and opportunities.

Reviewing the synthesized data revealed that the perceptions of the performance improvement emphasis varied among the area managers, area supervisors, plant manager, and production operators. Each stakeholder participating in the needs assessment faced different pressures for performance and, consequently, had different desired outcomes. The plant manager had focused on meeting the standards required for continued ISO-9000 certification. He viewed certification as important for meeting customers' requirements and for addressing safety concerns. Some customers purchase only from certified vendors. Also, the ISO-9000 certification requirement to document and standardize processes would address the safety needs relative to production operators working with toxic and potentially hazardous chemicals. In contrast, the production operators and area supervisors were more concerned with production demands and operators' capabilities.

After reviewing the data, the area managers, area supervisors, plant manager, and production operators agreed that several major opportunities for performance improvement existed that would address all the stakeholders' emphases. Opportunities such as documenting work processes and training production employees would improve operators' capabilities, increase production relative to demands, and also meet and exceed ISO-9000 requirements.

The analyst and Plant Manager agreed on a process that involved sharing the synthesized data with the stakeholders, verifying contrasting perceptions, and reaching consensus on concerns and potential opportunities for performance improvement. Sharing information resulted in full consensus on the means to accomplish the remaining analysis work and agreement that multiple final outcomes could ensue from the next phase of the analysis.

Phase 2, the work behavior analysis, focused on the production operator's job. This phase included subject matter analysis and job profile analysis using the Valpar-2000 job profiling system. Subject matter analysis involves analyzing the theory, the principles, and the practices necessary to perform the work (Swanson, 1994). The Valpar Job Profile is a two-step process that requires that first, two certified and independent profilers document and analyze all observable work behaviors involved with the specific job. The next step entails verifying the tasks, assigning levels to fourteen separate aptitude areas and assessing new and current operators against the standards established by the profilers. Assigning aptitude levels requires documentation using the *Dictionary of Occupational Trade* (1991) job identification numbers and recording aptitude levels from the *Handbook for Analyzing Jobs* (1991).

In reviewing the Phase 2 data with the area managers, area supervisors, and plant manager, the analyst identified specific process, performance skill and knowledge needs for the production operators. The other stakeholders in the process concurred. The Plant Manager and area managers had resources for addressing this training need. The duty of trainer/facilitator was recently added to the responsibilities of the area supervisors and provided time and human resources for delivering the needed training.

The area managers, area supervisors, plant manager, and analyst also agreed that all production operators needed to be trained or retrained on the orientation program and that the third phase of the PAT Model, analysis of individual capabilities, was unnecessary. The Plant Manager and analyst agreed to place full emphasis on the production operators training process.

Results

The results were obtained by comparing the actual performance analysis process with the study questions and propositions. Also reflecting on the process resulted in additional learning.

Study Question #1 and Proposition. The first study question asked: Will using the PAT Model in a specific organization that is implementing ISO-9000 processes produce the following predicted results: a) involve the organization decision maker(s) in the training process, b) provide the organization decision maker(s) with accurate and sufficient information for making determinations about the contributions that training should make to the performance needs of the organization, and c) provide the organization decision maker(s) with information useful for designing, developing, implementing, and evaluating training? After the performance analysis and the initial training were completed, the analyst and the decision makers evaluated the process and results of the needs analysis. The decision makers and the analyst agreed that the improvement effort provided exactly what was intended, a well-documented analysis of performance needs for enhancing production capabilities.

After reviewing all the documentation from the performance analysis, the analyst and the decision makers agreed that implementing the PAT model produced the predicted results. The decision makers stated that they had been involved in planning the analysis, contributed to its success, received on-going process reports, and discovered "many useful skills in the organization they were not aware of". They also commented on the usefulness of the analyst as a future resource for performance analysis and training, allowing them to deal with management issues and use their time wisely. In this situation, the decision makers felt that they had received accurate information from the literature and the work setting and that they had gained information useful for designing, developing, implementing, and evaluating training. The decision makers did come to the conclusion that the performance issue was more complex than they had initially thought and that providing training without considering other work place constraints would likely result in little use of the skills or knowledge.

Addressing the first proposition, the analyst and the decision makers agreed that the resulting outcomes were influenced by the three identified elements - organization characteristics, decision maker characteristics, and analyst characteristics—and their interactions. For example, a clear understanding of the organization's system, culture, and internal politics was key to understanding the performance problems and opportunities. Additionally, the rhetoric used by the organization and individual stakeholders had created an apparent consensus of perceptions while it masked real reasons for desired performance improvement. The analyst's focus on performance improvement, his ability to document differing perceptions, his experience with the Valpar-2000 job profiling system, and his profiling certification, had influence on both the process and the results. The decision makers' support of the performance analysis and their power to implement both training and non-training solutions impacted the process and outcomes of the project. One characteristic of the PAT Model was its "transparency". In this situation, the decision makers and employees were unaware that the analyst was using a specific model to guide the needs assessment.

Study Question #2 and Proposition. The second study question asked: What is the relationship between the actual process used for the performance analysis and the process outlined in the PAT Model? In practice, the PAT Model and the actual process used for the performance analysis were similar. Further, the PAT Model's use was virtually transparent to the organization and the decision makers. The decision makers and employees participated in the performance analysis, but were not required to be familiar with the PAT model. The learning for the organization occurred in the form of the identification of needs. However, the analyst noted four adaptations to the PAT model.

The first adaptation involved beginning the PAT Model Phase 2, work behavior analysis, while Phase 1, organization analysis, was in process. The decision makers had sensed prior to beginning the project that the work of production operators should be analyzed. However, they were unsure of the extent of the performance problem in the production area, the causes of the performance problem or even for sure that there were specific problems in this area. Therefore, the PAT Model was implemented as follows: Phase 1, Steps 1 through 6; Phase 2, Steps 1through 3; Phase 1, Step 7; Phase 2, Step 4. Further, the steps were not discrete: Some steps began before others were completed. The analyst found that completing Phase 1 and 2 in concert expedited the process. The information provided by Phase 1 of the PAT model contributed to the project. For example, knowing that stakeholders had varied perceptions for the performance improvement effort resulted in implementing a process for reaching consensus.

The second adaptation dealt with the use of PAT Model, Phase 2, work behavior analysis, as a decision making devise. The PAT Model outlines the intent of Phase 1 as "determine where in the organization or work group the training emphasis should be placed" (Sleezer, 1991). However, in this situation, the work behavior analysis was used in determining the emphasis area and the analyst and decision makers determined the targeted area for training at the completion of Phase 2, Step 3. In fact, the data gathered and synthesized during Phase 2 relative to specific job behaviors resulted in transforming the decision makers sensed need into specific, delineated and documented needs with implications for training, job redesign, and process improvement.

The third adaptation focused on the PAT worksheets for Phase 1 and 2 analysis. The analyst found that while the worksheets provided a guide and a framework for organizing the information, they did not lend themselves to the situation. Alterations and adaptations were required to contextualize the performance analysis tools. For example, the question in Phase 1, Step 2 "Do the decision makers and analyst agree about the purpose and parameters of the analysis . . . . Do not proceed with the assessment until there is agreement." In this situation, the agreed upon parameters changed with the input of new data. The question was finally answered after Phase 2, Step 3.

The fourth adaptation to the PAT Model involved using the Valpar 2000 profiling system to analyze work behavior. In the PAT Model, Phase 2, Steps 2 and 3 call for using analysis methods identified by Swanson and Gradous (1986). However, many other analysis methods are available (Jonassen, Hannum, & Tessmer, 1989). In this situation, the Job Description and Task Inventory tools described by Swanson and Gradous were integrated the Valpar 2000 method.

The Proposition analyzed during the process of answering the second study question emphasized the three levels of analysis present in the PAT Model—organizational, work behavior, and individual—referenced in the PAT Model: Will all three levels of analysis be appropriate for analyzing performance needs? In this situation, only the first two phases of the PAT Model were needed; prior to the third phase the decision was made to provide all production operators with training rather than to consider individual capabilities.

A thorough understanding of the performance situation did result from using the PAT Model. However, the four adaptations to the PAT Model suggest the importance of a contextualized model, customized to fit the situation and the analyst.

Conclusions

This case provided a test of the PAT Model and an examination of the process used in conducting a performance analysis. In a manufacturing organization implementing ISO-9000 processes, an adapted PAT Model usefully guided the analysis of performance needs. Implementing the performance analysis clarified the ideal work behaviors and the barriers created by the system and the work processes. It also facilitated understanding of knowledge and competencies required to improve production operator performance. In this situation, the performance analysis for training led to an immediate training solution and a greater understanding of the complexities of the system and performance environment. This study also showed that the process and outcome of a performance analysis were influenced by the organization's characteristics, the decision maker's characteristics, and the analyst's characteristics. Using the PAT Model revealed inconsistencies in performance expectations, increased the focus of the resulting training, and helped decision makers to make informed training decisions.

The PAT model provided a road map for investigating performance needs to appropriately address with training. However, a limitation of case study research is that the results can not be readily or immediately generalized to similar organizations. Continued research is needed to enhance the practice of performance analysis. Additional studies are needed to test the propositions and the transferability of the PAT Model in other situations.

References

Bolman, L. G., & Deal, T. E. (1991). Reframing Organizations. San Francisco, CA: Jossey-Bass.

Eisenhardt, K. M. (1989). Building theories from castle study research. Academy of Management Review, 4(4), 532-550.

Gill, S. J. (1995,May). Shifting gears for high performance. Training & Development 49(5), 25-31.

Goldstein, I. L. (1986). Training in organizations, needs assessment, development, and evaluation. Belmont, CA: Wadsworth, Inc.

Gupta, K. (1996). Conducting a mini needs assessment. Info-Line. Alexandria, VA: American Society for Training and Development.

Harrington, H. J. (1995). Total Improvement Management. New York: McGraw-Hill.

Hatcher, T. G. & Ward, S. (1997). Framing: A method to improve performance analyses. Performance Improvement Quarterly 10,(3) 84-103.

Holton, E. (in press). The flawed four-level evaluation model. Human Resource Development Quarterly.

Knorr, K. (1997). Adapting Performance Analysis for Training to Veterinary Medicine. Unpublished doctoral dissertation in process, Oklahoma State University, Stillwater.

Lewis T. & Bjorkquist, D. C. (1992). Needs assessment - A critical reappraisal. Performance Improvement Quarterly, 5(4), 33-54.

Lee, A. (1985). The scientific basis for conducting case studies of organizations. Academy of Management Proceedings, 45, 320-324.

Miles, M. B., & Huberman, A. M. (1984). Qualitative data analysis: A sourcebook of new methods. Beverly Kills, CA: Sage.

Moseley, J. L & Heaney, M. J. (1994). Needs assessment across disciplines. Performance Improvement Quarterly 7(1), 60-79.

Rossett: A. (1992). Analysis of human performance problems In Harold D. Stolovitch and Erica J. Keeps (Eds). Handbook of human performance technology. San Francisco: Jossey-Bass.

Sleezer, C. M. & Maile, C. A. (1997). Needs Assessment in Practice. Proceedings of the Academy of Human Resource Development, ???

Sleezer, C. M. (1991). Developing and validating the Performance Analysis for Training Model. Human Resource Development Quarterly 2 (4), 355-372.

Sleezer C. M. (1995). Using performance analysis to assess future technical training needs. In Jack J. Phillips, E. Holton (ed.), In Action: Conducting Needs Assessment. pages 241-253.

Sleezer, C. M. (1996). Using performance analysis for training in an organization implementing integrated manufacturing: A case study. Performance Improvement Quarterly, 9(2), 25-41.

Swanson, R. A. (1994). Analysis for improving performance. San Francisco: Berrett-Koehler.

Tannenbaum, S. I. & Yukl, G. (1992). Training and development in organizations. Annual Review of Psychology 43, 399-441.

Weick, K. (1995). Sensemaking in Organizations. Thousand Oaks, CA: Sage.

Yin, R. K. (1989). Case Study Research: Design and Methods. Newbury Park, CA: Sage.

Building the Credibility of a Training Department: A Case Study

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This study examines the efforts of a training department in a transit agency to begin building credibility within the organization by proactively identifying training needs, implementing a training intervention, and measuring the impact of that intervention on key organizational goals.

Many training departments find themselves struggling to gain credibility in the eyes and minds of the line managers who they support. Often, line managers perceive that the training department decreases the productivity of their employees by keeping them in long, frequent and unnecessary classes that do little to improve employees' skills. Without strong working relationships with line managers and a focus on interventions that improve employee productivity and performance related to key organizational objectives, training departments fail to serve their customers adequately. As a result, training departments continue to lack support, respect and influence, and are unable to prove their value to their organizations.

A training department for the maintenance department of a transit authority in the southwestern United States found itself in this very predicament. The line managers often complained that training classes disrupted their operations and that the training department was insensitive to operational issues. As one way of changing this perception, the Vice President of Training suggested that the training department identify, implement, measure and report the effectiveness of training interventions that impacted key organizational concerns. The Assistant Vice President recommended focusing on ways to reduce labor and parts costs related to bus road call repairs, because these were issues of great concern to line managers.

Problem Statement and Theoretical Framework

The purpose of this study was to determine whether conducting a training intervention that impacted important organizational goals, evaluating the effects of that intervention on the organization, and reporting those results to line managers would begin to enhance the credibility and influence of the training department within the organization.

A review of the literature was conducted to identify practical suggestions for tying training department goals to organizational goals, and effective ways for measuring and reporting the return on investment of training.

Tying Training Department Goals to Organizational Goals The literature has much to say on this topic, but contains mostly anecdotal, rather than well-researched examples of companies that have been successful in doing so. Therefore, the literature mostly provides support that tying department goals to organizational goals is what all departments are supposed to do and that this is the most effective way to build credibility within organizations.

"If trainers want to have credibility within their organizations, they needs to be viewed as people who understand the real business issues facing their companies" (Linkemer, 1987, p.55). Further, the purpose of the training department is to improve the performance and productivity of employees so they achieve organizational objectives. This purpose cannot be achieved if the training department's objectives are not aligned with those of the organization objectives (Pepitone, 1995; Harp, 1995; Robinson, 1995). "One of the major challenges to all training and development functions in today's changing organizations (is) ensuring that the training function addresses the organization's critical needs" (Chaddock, 1995, p.24). Chaddock explains that the training department must understand the variables that are critical for success in their organizations and then realign the training function to support organizational goals. "For the training and development function . . . what matters is being aware of change and understanding

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training department must understand the variables that are critical for success in their organizations and then realign the training function to support organizational goals. "For the training and development function . . . what matters is being aware of change and understanding its implications for the human-performance requirements of the organization" (Chaddock, 1995, p.24).

Measuring and Reporting the Return on Investment of Training Increasingly, training and development departments are being asked to provide evidence of their impact on the organization (Phillips, 1991). One way to do this is through reporting and measuring the return on investment of training. Many have written about how to evaluate training. For this study, an effective model that could be easily implemented was sought. Kirkpatrick and Phillips provided two such models.

Kirkpatrick (1994) identifies four levels of evaluation. Level 1 measures the reaction of participants to a training program (Did they like it?). Level 2 measures learning, whether the program objectives were met. Level 3 measures whether participants have transferred new behaviors taught in training back on the job. Level 4 measures the results (such as return on investment) of the training program.

Phillips (1991) also provides recommendations for measuring results. His suggests trainers: determine baseline data, determine an evaluation method, determine an evaluation strategy, conduct the program, and calculate return on investment. Phillips notes that data for evaluation measurements can be collected from observations, questionnaires, work observations, performance records, and tests. He notes also that hard data (output, quality, cost and time) is easier to collect than soft data (work habits, new skills, work climate, attitudes, initiative).

Phillips (1991) recommends calculating the return on investment of a training program when the program benefits can be clearly documented and substantiated. If management believes in the method of calculating the benefits, then they will have confidence in the value for the return. A return should be compared with a predetermined standard to be meaningful. Management should make the ultimate decision about whether the return is acceptable.

One formula recommended by Phillips (1991) for calculating the return on investment of training is savings/investment. The investment may include analysis costs, development costs, delivery costs, and evaluation costs.

Communicating program results that are significant should have a positive effect on increasing the credibility of the training department. Communication of the return on investment results must be timely (as soon as known), targeted to a specific audience, unbiased and modest (Phillips, 1991). Phillips cautions trainers not to boast about a high return on investment result. He states that it is not unusual to generate a high return on investment for training programs. A person boasting about this high return will be open for possible criticism from managers, particularly those with finance and accounting backgrounds, unless there are indisputable facts on which the calculation is based. Boastful statements may also turn off the recipient. Phillips recommends using testimonials if they are from individuals the audience respects. He recommends tailoring the communication strategy of results to the audience's perception of the HRD department.

In summary, the literature provides support for the importance of tying training department goals and activities to the organization's goals. However, few rigorous examples or case studies are provided about how to do so. The literature also provides some helpful methods for evaluating training interventions and communicating those results effectively to line managers.

Research Questions

The question to be answered in this study was:
Will the reporting of the financial impact of a training intervention begin to enhance the credibility of the maintenance training department within the maintenance department?

Methodology

This study is a case study of the attempts of one training department to begin to build its credibility within the organization by reporting the results of a training intervention on key organizational goals. The study had six phases. First, a key organizational goal was selected. Then, a needs assessment was conducted to determine why that goal was not being met. Third, it was determined which of these factors could be addressed by training. Fourth, a training intervention was identified and developed. Fifth, the training intervention was implemented. Sixth, the training intervention was to be evaluated. Lastly, the financial impact of the intervention was to be reported to line managers.

Key Organizational Goal Selected The organizational goal selected was "to reduce parts and labor costs due to bus road call repairs." A road call is a report about a mechanical problem with a bus made by the bus driver while the bus is transporting passengers. Typical road calls are the air conditioning is not cooling, the fare box is not calculating fares, the brakes are squeaking, the bus will not start. Reducing road calls is important because the more road calls there are, the fewer buses the transit agency has on the streets to transport passengers. Reducing the cost of road call repairs indicates to the transit agency that the maintenance department is containing its repair expenses. The number of road calls is published monthly for all managers, yet the causes of road calls are neither analyzed nor reported.

Needs Assessment

Trend Identification. The first step in the assessment was an identification of the trends in the road calls for the four systems with the highest parts and labor costs. A system is a set of related parts that perform a specific function within a bus. The transit authority tracks road calls in fifteen different systems, including air conditioning, brakes, engine, transmission, doors, and heating. The four systems with the highest parts and labor costs were air conditioning, brakes, engine and transmission.

Database records about road calls, between April 1, 1996 and October 31, 1996, for the four systems, were summarized; trends in the data were then identified. An emphasis was placed on identifying repeat road calls in the same system in each bus, because these had the greatest potential for indicating training related issues. The period of April through October was chosen because it covered three seasons of the year and was long enough to study both general and seasonal trends.

There were 549 buses in the entire fleet of the transit agency. The fleet was composed of buses from three different manufacturers: Neoplan, Flxible™, and RTS. All of the Neoplans were purchased in 1986, the Flxibles were all purchased in 1981, and the RTS buses were purchased in 1991. Each of these three types of buses had systems (such as air conditioning) from different manufacturers, as well. There were 347 Neoplan, 74 Flxible, and 128 RTS buses in the fleet. The sample in this study was 226 buses, approximately 40% of each bus type. 137 were Neoplans, 37 were Flxibles, and 52 were RTS.

Trend Analysis. The trends in repeat road call repairs were analyzed to determine their significance, root causes, and implications for training. Quality control personnel who were knowledgeable about bus repairs and systems analyzed the trends. In addition, mechanics who performed the repairs and their managers were interviewed to determine how repairs were actually performed. Mechanics and managers were interviewed separately. Interviews were conducted individually and with groups of four or five people. Interviews lasted up to 30 minutes. The mechanics who performed repairs had all worked for the agency for at least five years, most for at least ten years. In addition, the mechanics had equal experience repairing all three types of buses.

Which Causes May be Addressed by Training The interviews with quality control personnel, managers and mechanics indicated which causes of the trends could be addressed by training.

Identify Training Intervention A 2-hour training intervention was identified based on the information gained from all interviews. Course objectives and materials were developed based on this information. A trainer was selected to provide the training to 150 mechanics.

Implement Training Intervention The training intervention was not implemented in a timely manner, as will be discussed in the results section.

Evaluate Training Intervention Mathematical calculations were developed to measure the financial impact of the proposed training interventions on the organization using Phillips suggested formula of savings/investment.

Report the Financial Impact of the Intervention Because the implementation of the training intervention was not completed, the financial impact could not be reported. It was planned to report the results in a brief presentation at a meeting of the President of Maintenance, the Vice President of Maintenance Training, the Vice President of Bus Maintenance, and the Vice President of Train Maintenance. After this presentation, it was hoped that a similar report could be made to the managers who reported directly to the Vice President of Bus Maintenance and the Vice President of Train Maintenance.

Results

Trend Identification There were buses with repeat road calls for each of the four systems during the research period. These four systems were air conditioning, brakes, transmission and engine. The air conditioning system had the highest percentage of buses with repeating road calls (37%), followed by the engine with 19%, the transmission with 11%, and the brake system with 5% (see Table 1).

Table 1 Summary of Repeating Road Calls by System and Bus Manufacturer

	FLXIBLE	NEOPLAN	RTS	% ALL BUSES
Air Conditioning	89%	34%	19%	37%
Brakes	7%	3%	0%	5%
Transmission	15%	15%	0%	11%
Engine	37%	23%	3%	19%

In each system, Flxibles always had the highest frequency of repeating road calls, followed by Neoplans and then RTS buses. The number of times a bus returned to the shop for a repeating problem in a particular system ranged from two to twenty-one. The average bus returned between two and five times. Buses with repeating air conditioning problems returned to the shop most often. Buses with repeating transmission problems returned a maximum of six times. Buses with repeating engine and brake problems returned a maximum of five times for each of these system problems.

Causes of Trends that may be Addressed by Training After reviewing the information regarding the number and types of repeating road calls by system, it was determined that the root causes of repeat, air conditioning road calls could be partially addressed by training. The Training Manager decided not to investigate the root causes of the brake, transmission and engine road calls in order to complete the study in a reasonable period of time. Since the majority of repeat road calls were in the air conditioning system, this system was also selected for further study because reductions in this system's parts and labor costs would have the greatest impact on the organization.

The predominate root cause of the air conditioning road calls was determined to be a build up of non-condensable gases. Analysis of the road call data and information gathered from interviews revealed this build up was partially a result of poor equipment, and partially a result of incomplete repair diagnosis and improper equipment use by mechanics. In addition, some of the air conditioning road calls may have been due to the age and poor quality of the system in the Flxible buses. Faulty parts were ruled out as causes of the repeat road calls. An explanation of these findings follows.

Analysis of the road call data. The road call data shows that the majority of air conditioning repairs involved replacement of condensers, compressors, compressor belts, and clutches. These findings were consistent in all three, bus types and most apparent in the Neoplan buses. Most striking about all of these replacements is that many of the same parts were replaced in the same bus within a few weeks or months. Some of the compressors, condensers and compressor belts were replaced up to four times in a single bus during the seven-month research period.

Informational Interviews. Interviews with quality control personnel revealed that the frequent replacement of compressors, clutches and condensers was due to the build up of non-condensable gases, primarily nitrogen. The build up of gases created high pressure in the air conditioning system and resulted in the premature wear of condensers, compressors and clutches. This was discovered by one quality control expert whose main function is to inspect parts that are replaced before their warrantee expires and inform the manufacturer of the situation. The manufacturer then provides the reason for the premature failure of the part. The frequent parts replacements indicated the mechanics were fixing the symptom (part failure), but not the root cause (build up of non-condensable gases) of the air conditioning road calls. Interviews with mechanics also revealed that they did not routinely review past repair records when repairing each bus.

The informational interviews revealed additional causes of frequent parts replacement. First, when the clutches were inspected, it was discovered that mechanics did not match the clutch key with the right brand of clutch, and then installed the key improperly. This caused the clutches to burn up from friction and wear out prematurely. Second, it was discovered that the machines that remove non-condensable gases from the air conditioning system were not operating properly and that mechanics were not operating them as long as required by the operating manuals. New machines were purchased during the study period.

Age and poor quality of system in Flxible buses. The age and type of air conditioning systems in the Flxible buses may have also contributed to the high number of repeat repairs. The Flxible buses were fifteen years old. The average life span of a bus is twelve years. As a bus ages, repairs become more frequent. Repairs for all systems in the Flxible buses are more frequent then for the other two bus types. In addition, the air conditioning system in the Flxible buses is a "split system." The buses originally came with an air conditioning system that consisted of two separate systems combined into one. In 1991, the two-compressor system was converted to one and all the old components were retained. It is difficult to keep the converted system in balance; this results in premature parts failures. The Flxible buses will be removed from the transit agency's fleet by the end of 1997.

It should be noted, as well, that the air conditioning system in the RTS buses is the most basic of the three systems. The more basic a system, the fewer parts there are to maintain and fail. This is evidenced by the lower repair rates. In addition, the RTS system is compact. The parts are close together which allows a faster cooling response by the system. The air conditioning system in the Neoplan buses is slightly more complicated than the RTS system. Some parts have dual lines that allow for more parts to break. There is, however, nothing endemically wrong with the systems in the RTS and Neoplan buses.

Faulty parts ruled out. Faulty parts were considered as a potential cause of the excessive parts replacements, however this hypothesis was ruled out as information came to light about non-condensable gas build up. In addition, the quality control personnel and the manufacturers would have noted if the parts were faulty in their initial reports.

In summary, the issues that can be addressed by training are the mechanics' improper diagnosis of non-condensable gas build up, improper use of machines that remove non-condensable gases, and improper clutch key replacement and installation.

Identify Training Intervention The Training Manager designed a two-hour training program that presented information about these issues and allowed mechanics to practice the skills taught. This course was to be provided to 150 mechanics. Job aids were also created as course materials and would be placed in easily accessible locations in the repair shops. Mechanics will be able to refer to these aids when needed.

Implement Training Intervention The training program was originally planned for delivery in May 1997, before the summer season, when air conditioning breakdowns are most prevalent. The program was not implemented until mid-August 1997, after the researcher's deadline for completion of this paper.

Evaluate Training Intervention and Report the Financial Impact of the Intervention Since the training intervention was not completed before the researcher's deadline, the financial impact of the intervention could not be determined and reported. However, the formula developed for measuring the financial impact is presented below. This formula is based on Phillips' (1991) recommendation that one of the best ways to measure the return on investment of training is by the formula: Savings/Investment.

$$\frac{\text{Savings}}{\text{Investment}} = \frac{\text{A/C Parts Cost Change + A/C Labor Cost Change}}{\text{Research + Training Prep + Materials + Trainer + Mechanics + Evaluation}}$$

Savings:

Parts Cost Change:	(A/C parts costs in 1997) - (A/C parts cost in 1996)
Labor Cost Change:	(A/C labor costs in 1997) - (A/C labor cost in 1996)

Investment:

Research:	Amount of time spent by the researcher and quality control personnel studying air conditioning problems multiplied by the salaries of these personnel for that time period.
Training Prep:	Amount of time spent developing training class and job aids to address training issues multiplied by the salary of the Training Manager for that time period.
Materials:	Cost of all materials used during training.
Trainer:	The hourly salary of the trainer teaching the classes multiplied by the number of classes taught, multiplied by the length of the class.
Mechanics:	The average hourly salary of the mechanics who attend the class, multiplied by the number of mechanics, multiplied by the length of the class.
Evaluation:	The average hourly salary of the trainer who performs the evaluation calculations times the amount of time spent performing the evaluation calculations.

Conclusions and Recommendations

Trend Analysis Buses at the transit agency experienced repeating road calls in all four bus systems. Listed from greatest to least frequency, these systems were air conditioning (37%), engine (19%), transmission (11%), and brakes (5%). The fact that the number and frequency of air conditioning road calls were by far the highest, indicated that these problems deserved immediate study. The root causes of the repeating road calls in the transmission and engine systems are not clear at this time, but the trends were not as strong as those of the air conditioning system. The costs incurred from brake repairs were largely due to preventive maintenance inspections each time a bus was repaired for any reason. These costs alone are acceptable.

The fact that repeating road calls occurred indicates that the transit agency is spending too much money on parts and labor incurred from road call repairs. Therefore, individuals should be assigned to monitor trends on a monthly basis and proactively identify opportunities for intervention.

Causes of the Trends That may be Addressed by Training It was determined that some of the root causes of repeat air conditioning road calls were due to improper diagnosis of non-condensable gas build up, improper use of machines that remove non-condensable gases, and improper clutch key replacement and installation by mechanics. To address these issues, the training program created by the training manger should be concluded as soon as possible.

Mechanics also did not routinely review repair records, and bring premature part failures to the attention of management. Both these and the three training issues above indicate a need for closer supervision of mechanics. Supervisors need to observe the mechanics as they make repairs and correct them when they see mistakes, ensure mechanics examine past repair records, and encourage and listen to mechanics' suggestions.

In addition, the information in the special training class needs to be incorporated into existing air conditioning training classes. The job aids created need to remain accessible to mechanics. Supervisors also need to ensure the mechanics use both the new techniques taught during the training class and the job aids.

A final note is that one of the quality control personnel stated that the problem with non-condensable gas build up has existed for five years. While he has submitted reports about it in the past, no one has acted on his recommendations. Therefore, it might be beneficial to diagnose the reasons these recommendations went unheeded and implement appropriate remedies. These may include changing procedures or coaching quality control personnel about how to sell their recommendations to management.

The Evaluation Effort The Training Manager did not ensure that his training intervention was implemented in a timely fashion in order to measure the results one year after the study began. The peak time for air conditioning road calls is during the summer months of June through September. Since the training intervention did not begin until mid-August and will not be completed until the end of September, at the earliest, the Training Manager missed his opportunity to evaluate his impact in 1997. This means that if he does measure and report the impact next year, he will be more open to questions about the validity of his results. It will be more likely there are additional variables that contributed to the change in parts and labor costs.

The Effort to Build the Credibility of the Training Department While the Training Manager wanted to improve the credibility of his department, he seemed unaware of the importance of the deadlines he needed to meet. Therefore, further education about the evaluation process might benefit him. When the Training Manager assigned the training intervention to one of his instructors, the instructor mentioned reservations about why the training program might not be appropriate in one of the three repair shops. The Training Manager, who liked to allow his instructors freedom, allowed the instructor to follow up on his reservations and delay the implementation of the training classes. The researcher believes the instructor's reservations may have been politically motivated by his friendship with a quality control specialist in the repair shop that was not involved in the analysis phase of the study. It would have been better for the Training Manager to probe the instructor more about the reasons for his concerns, identify the real cause, and then set a deadline for program implementation if the reservations were valid.

Finally, while effective return on investment results for the training intervention will certainly help the training department's credibility, there are other strategies the Training Manager and Vice President of Training should employ. In order to build the credibility of the training department, they need to build relationships with shop managers and the Vice President of Bus Maintenance, who is the peer of the Vice President of Training. The Vice President of Bus Maintenance is a difficult personality who does not respect the training personnel and shares his beliefs with his direct reports. The Vice President of Bus Maintenance also ignores requests for meetings with the Vice President of Training and the Training Manager and frequently and publicly points out perceived flaws in the training the mechanics receive. The Vice President of Training and Training Manager must develop their conflict resolution skills and find ways to interact more successfully with the Vice President of Bus Maintenance. Without strong relationships with line managers, the training function will always struggle for credibility and influence.

Contributions to the HRD Field

This study should have an impact on professional practice in the following ways. First, there are few case studies in the literature about how to build the credibility of a training department. The literature advises you to do so, but does not say how. This methodology of the study serves as a potential model for other Training Managers. Second, the methodology for measuring training effectiveness can be modeled. Third, this study revealed that building the credibility of the training department is based on ability to complete the tasks of planning, evaluating and reporting the impact of a training intervention *as well as* creating and maintaining working relationships with line managers. Relationship issues are generally not discussed in the literature.

Recommendations for Further Research

1. Conduct a longitudinal study of this training department and its success and failures as it strives to build credibility (case study).
2. Focus on how to build relationships with line managers as well as the task of reporting the results of training as essential to building the credibility of the training department.

References

Callahan, M. R. (1995). Training on a shoestring. Training & Development, 49(12), p.18-23.

Chaddock, P. (1995). Building value with training. Training & Development, 49(7), p. 22-34.

Chapados, J. T., Rentfrom, D. & Hockheiser, L. I. (1987). Four principles of training. Training & Development Journal, 41(12), p. 63-66.

Harp. C. (1995). Link training to corporate mission. HRMagazine, 40(8), p. 65-68.

Kirkpatrick, D. L. (1994). Evaluating training programs: The four levels. San Francisco: Berrett-Koehler Publishers.

Linkemer, B. (1987). The critical connection. Training, 24(11), p.55-58.

Pepitone, J. S. (1995). Future training: A roadmap for restructuring the training function. Dallas: AddVantage Learning Press.

Phillips, J. J. (1991). Handbook of training evaluation and measurement methods (2nd ed.). Houston: Gulf Publishing Company.

Queeney, D. S. (1995). Assessing Needs in continuing education. San Francisco: Josey-Bass Publishers.

Robinson, J. C. (1995). Performance takes training to new heights. Training & Development, 49(9), p. 20-24.

Sullivan, Wircenski, Arnold, & Sarkees (1990). The trainer's guide, a practical manual for the design, delivery, and evaluation of training. Rockville: Aspen Publications.

Identification, Training, and Certification of Expertise Required of Core Business Processes

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This case study goes beyond the traditional job and task analysis model into a contemporary business performance improvement model of: Business goal, performance requirement, work process, process-referenced task analysis, expertise training and development, expertise certification, and performance improvement.

Workplace expertise is the fuel of an organization. Herling (in-press) characterizes human expertise as a complex and multifaceted phenomenon. He defines human expertise as: *Displayed behavior within a specialized domain and/or related domain in the form of consistently demonstrated actions of an individual which are both optimally efficient in their execution and effective in their results.*

Our contemporary communication technology allows us to regularly listen to and view performances by the true experts in many fields of endeavor. We are surrounded by high quality symphonies, lectures, books, movies, sports, and craftsmen. Most of us want and/or expect to be surrounded by high levels of expertise. While the desired state of high expertise can be easily held in the minds' eye, organizations have a continuing struggle in assuring minimal expertise for meeting existing requirements, let alone having expertise to meet future requirements. Meeting and maintaining workforce expertise requirements that are connected to organization goals and core work process requirements are a fundamental challenge to organizations.

Traditional Job-Task Approach to Expertise Organizations have for the most part embraced the job and task oriented approaches to defining workplace expertise and have relied on multiple analysis procedures (Holton, 1995; Swanson, 1996). These approaches are familiar to most human resource management professionals and are driven by federal law in many cases. Essentially they all contain three basic steps:

1. Developing a list of job tasks that may be performed in a job.
2. Verification of the task list as a valid representation of the job.
3. Analysis of precisely what a person needs to know and be able to do to meet a specified performance standard for each task.

Fundamentally, job and task analysis methodologies address the proper unit of analysis: the work task. In practice, the custom is often to use existing job structures, current work practices, and current employees as the frame with which to determine those work task requirements. The outcome is task and expertise analyses that are grounded in the present. In stable environments, this approach works. What happens, however, if jobs, work tasks, and task expertise are not stable but changing rapidly? In today's fast changing world, job responsibilities and requirements change and shift rapidly. New approaches are needed to develop expertise that prepares organization for future changes.

One response has been to change the data collection processes with shorter cycle time so that job analysis is more manageable as jobs change. The assumption here is that traditional thinking and analysis methods are okay, but that they need to be used more aggressively.

At the other end of the thinking, some organizations are taking the position that jobs must be designed to be indeterminate and flexible. As a result, how do you analyze them? There are suggestions in the literature that flexible job models that allow organizations to manage competencies, not jobs, are necessary.

Competency-Based Approach to Expertise Competency assessment is one approach that has been developed to overcome some of the limitations of traditional job analysis (DuBois, 1993). Competencies are generally defined as some underlying characteristic of an employee that enables them to perform the job or task. Because it is an underlying characteristic and one step removed from the tasks themselves, it is a more flexible approach that can be used to select and develop employees across multiple jobs.

Competency models generally proceed in the same fundamental steps as the job analysis model, the only difference being that work tasks are analyzed for underlying competencies as opposed to knowledge, skills and abilities. In some cases, steps one and two are skipped and

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experts are used to develop the competencies directly. This is particularly the case in occupational analysis.

The key point is that competency models are also job-based and therefore operate under the same assumptions outlined above and are subject to the same criticisms that job-based methods are. To the extent that competencies are more likely to be stable than job tasks, they are an improvement, but they still fall short for all situations and particularly in the realm of defining the specific expertise (not general competencies) required to perform.

Strategic Approach to Expertise What is needed is a new system for identifying expertise for work outputs that:

1. is anchored in more stable components of the organization
2. is flexible as it relates to job structures
3. separates work expertise and individuals from job structures
4. addresses organizational, process and individual levels of performance
   can be used strategically, not reactively

This strategic management of expertise is fundamentally different than traditional processes because it addresses the objectives listed above. In this model, organizations manage strategic goals, core processes, and core competencies and expertise. Job structures emerge as a final step in the process, but have no real role in the planning. That is, jobs can be reorganized without affecting the expertise planning. Jobs are expected to change frequently as expertise is re-deployed to achieve strategic goals. Employee development systems are focused on expertise, not jobs. *It is an integrated planning process that links expertise to core business processes which are linked to customer needs.*

The Healthcare Inc. Case

Healthcare Inc. is facing a serious business problem. Even though the company sales-force is made up of some extraordinary capable people, the largest accounts are increasingly being captured by the competition. Sales are down, and in response the company is changing the sales process and the way people will do their jobs. Analysis has revealed the need to revise the core sales process. Doing this will put the people working in the nine job roles, which contribute to the completion of a sales transaction into a new working relationship. Furthermore, the best people now working in sales do not like the pending changes and are considering leaving.

This actual case is fairly common in contemporary organizations. And, for management the question is -- How can an organization maintain and develop the organization's core workforce expertise in the middle of change?

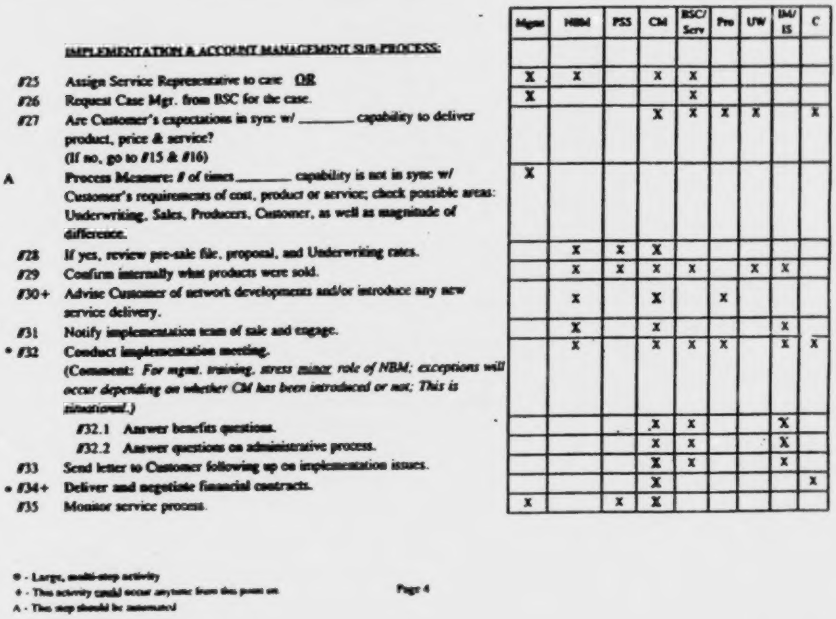
The case study reported here is of an actual company under the pseudonym of Healthcare Inc., a major health care insurance company and provider in the United States. The Healthcare Inc. business goal was focused on increasing sales in a changing and competitive environment. In this case, the sales process was a core work process needing revision and realignment in relation to the business goal and the workforce expertise. This case clearly illustrates the need for new approaches to analyzing and building workplace expertise in fast changing competitive environments.

Diagnose the Performance The need for this total effort was fully clarified in a thorough a performance improvement proposal based on a rigorous analysis method. The general steps of this performance diagnosis process included: (1) Articulate initial purpose, (2) Assess performance variable, (3) Specify performance measures, (4) Determine performance needs, (5) Construct improvement proposal (Swanson, 1996 p. 45).

A summary of the up-front analysis data was reported back to senior management through the cells created by the performance diagnosis matrix of enabling questions used in this diagnosis phase. The data from these cells in context of the strategic business goals of Healthcare Inc. were used as a basis for uncovering existing system sales performance problems and solutions. A major conclusion was that the existing sales process was incapable of meeting the strategic business goals of timeliness and quality features necessary to retain market share. Thus, the sales process needed to be significantly improved, the roles in the process needed to be clarified, and the expertise required to expertly carry out the roles within the process needed to be in place.

Document the Existing Process The existing sales process was documented and found to be a 79 step process spread over nine job categories. The resulting integrated flowchart-- an integration of the steps within the process and the people that work in the process-- brings the process and the people working in the process to the fore. As you can see in Figure 1, each step from the integrated flowchart is coded against all those job roles directly involved in that step. For example, there are three job roles engaged in step 31. Of those, the new business manager (NBM) is primarily responsible for the oversight of this step with input from CM and Pro. The bold "X" against the NBM role for step 31 indicates responsibility. A separate time-sensitive longitudinal flowchart of each of the 79 steps is also produced.

Figure . The Record of sales ProcessSteps (page 4 of 10)



		Mgmt	NBM	PSS	CM	BSC/ Serv	Pro	UW	IM/ IS	C
	IMPLEMENTATION & ACCOUNT MANAGEMENT SUB-PROCESS:									
#25	Assign Service Representative to case OR	X	X		X	X				
#26	Request Case Mgr. from BSC for the case.	X				X				
#27	Are Customer's expectations in sync w/ _______ capability to deliver product, price & service? (If no, go to #15 & #16)				X	X	X	X		X
A	Process Measure: # of times _______ capability is not in sync w/ Customer's requirements of cost, product or service; check possible areas: Underwriting, Sales, Producers, Customer, as well as magnitude of difference.	X								
#28	If yes, review pre-sale file, proposal, and Underwriting rates.		X	X	X					
#29	Confirm internally what products were sold.		X	X	X	X		X	X	
#30+	Advise Customer of network developments and/or introduce any new service delivery.		X		X		X			
#31	Notify implementation team of sale and engage.		X		X				X	
• #32	Conduct implementation meeting. (Comment: *For mgmt. training, stress minor role of NBM; exceptions will occur depending on whether CM has been introduced or not; This is situational.)*		X		X	X	X		X	X
	#32.1 Answer benefits questions.				X	X			X	
	#32.2 Answer questions on administrative process.				X	X			X	
#33	Send letter to Customer following up on implementation issues.				X	X			X	
• #34+	Deliver and negotiate financial contracts.				X					X
#35	Monitor service process.	X		X	X					

● - Large, multi-step activity
+ - This activity could occur anytime from this point on
A - This step should be automated

Page 4

The core method of documenting the existing process was to (1) telephone interview a select group of sales people, sales managers, and sales support personnel. In this case interviewees came from four regions throughout the United States; (2) create a first draft of the integrated flowchart; (3) visit multiple sales offices and observe sales personnel and sales support personnel carrying out their work (including going on sales calls); (4) create a second draft of the integrated flowchart; (5) send out the sales integrated flowchart to the select group for review, revision, and approval.

Improved Process The integrated flowchart of how the work is presently done is used as a basis for selecting a group of personnel to review and revise. This was done in a face-to-face two day work session. Each participant had the integrated flowchart prior to the meeting and was informed of the process improvement goal. As each step was reviewed, along with the job roles contributing to that step, improvement revisions were entertained, evaluated, and acted upon by the group. In this case, the 79 step process was reduced to 52 steps and all nine job categories contributing to the existing process continued to contribute to the revised process in a modified manner. In addition, the 52 steps were clustered into sub-processes or phases: (1) Pre-sale (24 steps); Implementation and account management (25 steps); Sales renewals (18 steps); and Settlement (12 steps). Following the 2-day work session, the revised integrated flowchart was sent to a discrete list of Healthcare Inc. decision makers for their final approval.

Specify Process-Referenced Tasks This phase and the next two phases were completed in one 2-day work session. This phase involved the earlier team of Healthcare Inc. experts – the select group of sales people, sales managers, and sales support personnel– along with the professional trainers that had up to then been responsible for developing sales expertise in sales personnel and who would be partially responsible for the new Healthcare Inc. sales personnel development system.

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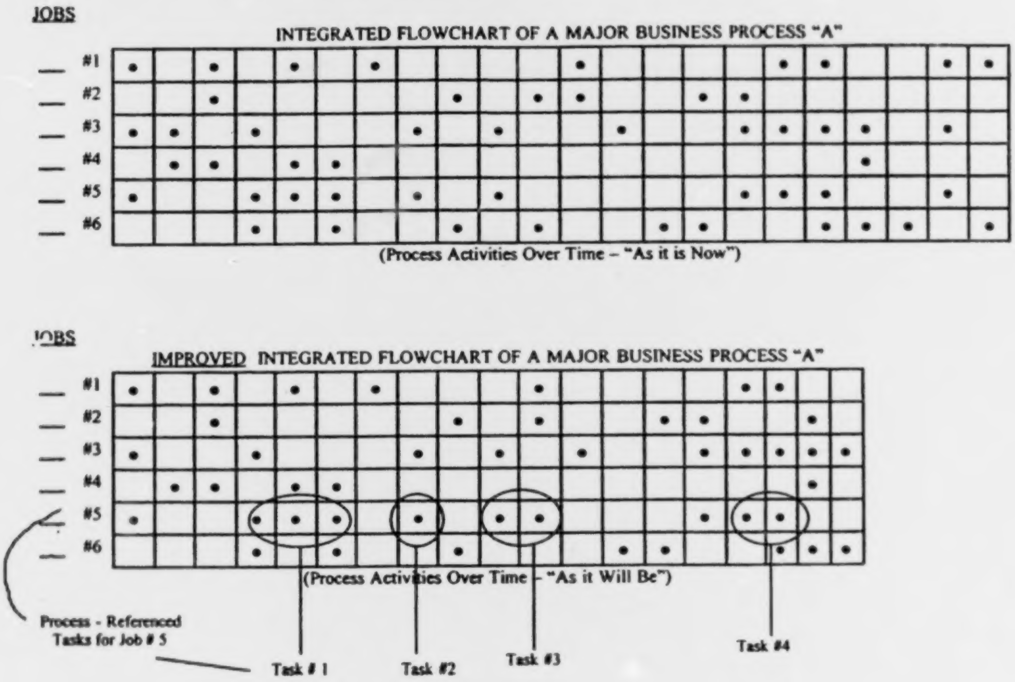
Given the improved sales process, the team clustered 52 sales process steps into tasks attributable to one or more of the nine job roles in the sales process. In some instances a single step was equivalent to a task, and in most instances several highly related steps were clustered into a process-referenced task. When this occurred, a task name was given the grouping of steps. Figure 2 graphically characterizes this process. This phase is relatively easy to do and, yet, is it fundamental in connecting of work tasks to core work process(es)-- something regularly missing in organizations and a source of major performance "disconnects" in organizations.

Figure 2. PROCESS-REFERENCED TASKS
"Identifying job tasks within major business processes."


JOBS
INTEGRATED FLOWCHART OF A MAJOR BUSINESS PROCESS "A"
#1
#2
#3
#4
#5
#6
(Process Activities Over Time – "As it is Now")
JOBS
IMPROVED INTEGRATED FLOWCHART OF A MAJOR BUSINESS PROCESS "A"
#1
#2
#3
#4
#5
#6
(Process Activities Over Time – "As it Will Be")
Process - Referenced Tasks for Job # 5
Task # 1
Task #2
Task #3
Task #4

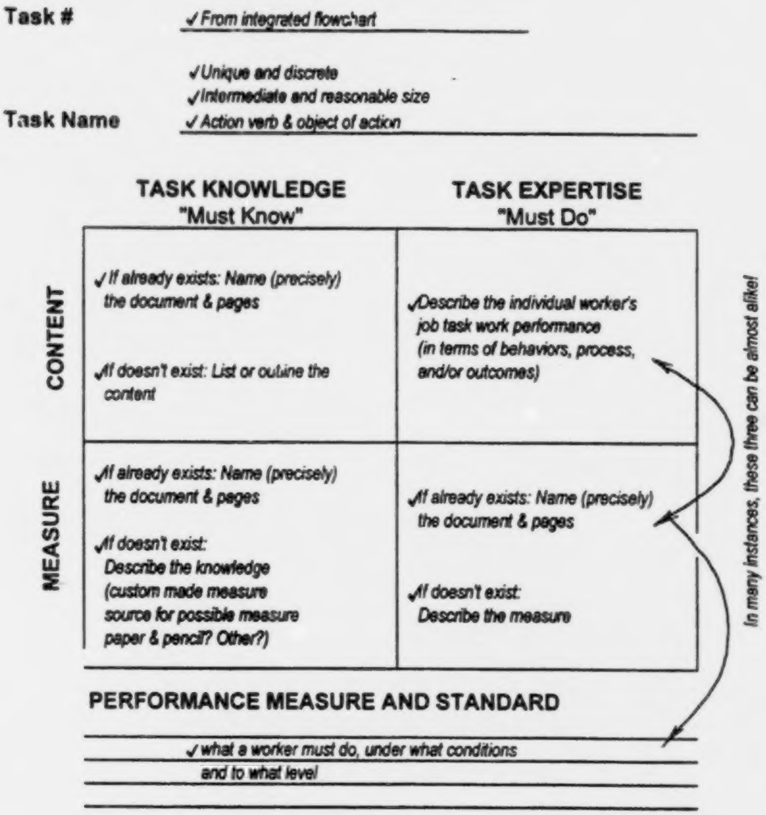
Establish Process-Referenced Task Standards (performance, expertise, knowledge) While the preceding phase is relatively simple, this phase is quite taxing. Task standards for each task, in the forms of performance "measure and standard," (2) the "must know" knowledge, and (3) the "must do" expertise are established. In doing this work, the following data sheet is used to record decisions (Figure 3).

One critical time-saving aspect to this effort is to identify *existing* documentation and sources of knowledge, expertise, and measurement. In fact, participants in this process were asked to bring along all readily available relevant documentation to the process-referenced tasks under consideration for review and consideration during the work session. In fact, so many good ideas were coming out so fast from the group it was critical to have an official recorder of information in order that no information was lost.

This highly charged session at Healthcare Inc. yielded critical basic information in the realms of performance standards, basic knowledge, and unexpected sources of expertise and related training materials. One example was to discover that two particular sales personnel produced exceptional proposals and the team requested copies from them to use as core training aides.

Produce Task Training and Certification Modules Following *the establishment of process-referenced task standards*, the Healthcare Inc.'s training professionals put together field-based learning modules for those working in the sales process. The learning objectives, field learning guides, and support materials were produced to develop the required knowledge and expertise sales process-referenced tasks.

Figure 3. PROCESS REFERENCED TASK STANDARDS
"Performance, Knowledge, and Expertise Data"



Task # ✓From integrated flowchart

✓Unique and discrete
✓Intermediate and reasonable size
Task Name ✓Action verb & object of action

	TASK KNOWLEDGE "Must Know"	TASK EXPERTISE "Must Do"
CONTENT	✓If already exists: Name (precisely) the document & pages ✓If doesn't exist: List or outline the content	✓Describe the individual worker's job task work performance (in terms of behaviors, process, and/or outcomes)
MEASURE	✓If already exists: Name (precisely) the document & pages ✓If doesn't exist: Describe the knowledge (custom made measure source for possible measure paper & pencil? Other?)	✓If already exists: Name (precisely) the document & pages ✓If doesn't exist: Describe the measure

In many instances, these three can be almost alike!

PERFORMANCE MEASURE AND STANDARD

✓what a worker must do, under what conditions and to what level

In addition, tests were developed and administered to certify knowledge and expertise on a task-by-task basis. Individuals working in the improved Healthcare Inc. sales process were required to be certified in each processed-referenced task within their job. To this end, the personnel assessment and development process is illustrated in Figure 4.

Summary of the Healthcare Inc. Case The strategic management of expertise at Healthcare Inc. proved to be efficient and effective. A significant portion of the activity was on uncharted territory for the company and the company consultants. While the individual elements appeared rational and at times routine, the overall perspective of directly connecting business goals and the expertise of individuals was radical. In addition, the timeline of eight months to accomplish this with credibility was almost revolutionary.

Managing the Development of Expertise

One primary goal of management is to develop and maintain workforce expertise that is systematically connected to business goals and the process(es) by which the work is carried out. Even if the world stood relatively still-- such that work methods and normal employee turnover were evolutionary, not revolutionary-- this would be a challenging task.

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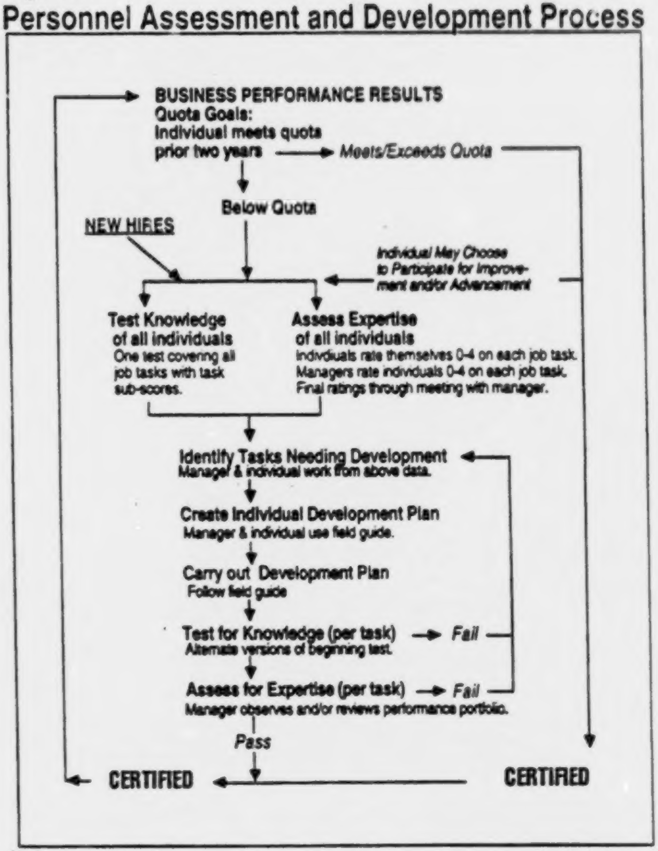
Figure 4.

Personnel Assessment and Development Process


BUSINESS PERFORMANCE RESULTS
Quota Goals:
Individual meets quota
prior two years
Meets/Exceeds Quota
Below Quota
NEW HIRES
Individual May Choose to Participate for Improvement and/or Advancement
Test Knowledge of all individuals
One test covering all job tasks with task sub-scores.
Assess Expertise of all individuals
Indivdiuals rate themselves 0-4 on each job task.
Managers rate individuals 0-4 on each job task.
Final ratings through meeting with manager.
Identify Tasks Needing Development
Manager & individual work from above data.
Create Individual Development Plan
Manager & individual use field guide.
Carry out Development Plan
Follow field guide
Test for Knowledge (per task)
Alternate versions of beginning test.
Fail
Assess for Expertise (per task)
Manager observes and/or reviews performance portfolio.
Fail
Pass
CERTIFIED
CERTIFIED

A naive assumption would be that most of the human expertise required to understand and fulfill performance requirements already exists in the organization and that the job of management is to simply to patch it up as necessary.

This system points to a fundamentally different approach to developing employees. Employee development is focused on employees building a portfolio of expertise linked to core processes. A strategic expertise map allows organizations to manage expertise rather than jobs. Employee development systems become future-oriented and closely linked to core business processes and critical strategic goals. Employees can manage their careers based on expertise, rather than jobs. Jobs become temporary holding places that can and will change frequently.

The work of developing and maintaining workforce expertise is not so simple. The two primary *selection strategies* available to management are : (1) to select individuals based on *having the required expertise* or (2) select individuals *based on their capacity to develop the required expertise*. In addition, there are two primary *development strategies* available to management: (1) the *organization determines* the required workplace expertise and development method or (2) *individual workers determine* the required expertise and development method. Figure 5 illustrates this matrix.

The first selection strategy is that of candidates already having the required expertise. The problem here is that much of the *required expertise* to be a true expert in an organization is organization-specific. To the point that it is generic professional or industry-wide expertise, it can likely be hired in the marketplace. Organization-specific expertise can only be developed in or through the organization. For example, many management skills are generic and can be acquired in the marketplace. However, a manufacturing manager is unlikely to have the expertise needed to oversee proprietary processes.

		Selection Strategies	
		Candidates already have expertise required	Candidates have capacity to develop expertise required
Development Strategies	Organization determines the required expertise & development method	1	2
	Individuals determine the required expertise & development method	3	4

Figure 5: Strategies for Obtaining Expertise

The second selection strategy is that of candidates having the *capacity to develop* the required expertise. This perspective informs us that adults have a capacity that directs and limits their growth. This capacity should not be thought of as being organization or industry-specific. Rather, it is content and context specific. For example, a person's mathematical aptitude (content) will limit their ability to handle complex financial equations. And, a person's social style (context) will limit the interactive arenas in which they will be effective. Many organizations today are finding that their employees lack the basic skills to adapt to unskilled jobs. One hospital changing to an computerized system for patient services found that fully half of their employees could not operate the system because they could not read what was on the computer screen. At higher levels, some traditional managers accustomed to a "command and control" approach to managing people have not had the capacity to adapt to newer team-oriented organizations.

The first development strategy is that of the organization determining the required expertise and the appropriate development strategy. Nuclear plant operator and airline pilot training are two examples of this approach. In these cases, organizations must carefully control the expertise development process to insure safety where death and destruction are the direct result of lack of expertise.

The second development strategy, that of the individual determining the appropriate expertise needed and development strategy, is quite typical of professional roles, especially highly specialized ones. It is probably quite appropriate that professions such as field biologists or certified public accountants determine their expertise development. Increasingly though, organizations are involving front-line workers in determining development strategies, particularly in organizations adopting quality management or learning organization strategies.

What is the best approach? Each of these cells provide advantages and disadvantages. A caution would be to not find yourself locked into one cell or one view. Staying locked into a cell 1 strategy of hiring all the required expertise and having the organization control the expertise determination and development process may lead to frequent reengineering and layoffs as expertise requirements shift. Equally dangerous is using only a cell 3 strategy whereby employees are selected for their capacity to develop and then determine expertise development needs themselves. While learning capacity and activity may be high under this approach, the organization may find itself lacking in the core expertise required to achieve its strategic goals.

A rational approach might be to embrace all cells when thinking strategically. Such a holistic approach is probably best for organizations in high change environments to entertain in order to be prepared for all scenarios. Developing expertise in the midst of change means organizations must abandon unidimensional approaches and find an appropriate balance between all four cells.

Employees should be *selected* both for the expertise they bring with them, and for their capacity to develop new expertise as needs change. Especially in high-technology arenas, today's expertise may well be obsolete in a short time. In the midst of change, the *capacity* to develop is just as important as current expertise. At Healthcare, Inc., sales employees were afraid of the change, in part because their capacity to develop was not adequately considered when they were selected. When their expertise became outdated, they struggled to change.

Similarly, organizations should be partners with the individual to determine future expertise and development needed. The organization clearly has the most strategic view and needs to be sure that development will lead to business performance in the future. On the other hand, the individual employee is often the first to realize that changes are occurring in the marketplace that will require new expertise. In many instances, employees recognize the need for new business practices and innovations before management. Healthcare, Inc. could have benefited from a stronger partnership with employees to recognize the need to re-engineer sales processes to meet growing competition. As it was, the changes only occurred when competitive pressure reached crisis levels.

Conclusion

The contemporary management literature speaks powerfully about the struggle organizations are having in connecting their leadership roles and organizational systems to intellectual capital and workplace expertise of individual contributors. Two examples range from: the Jacobs and Jones book , *Structured On-The-Job Training: Unleashing Employee Expertise in the Workplace* (1995), that informs us of how to utilize expert employees to develop similar expertise in fellow employees, to the Robinson and Stern book, *Corporate Creativity: How Innovation and Improvement Actually Happens* (1997), that provides six essential elements necessarily for employees to do something new and potentially useful without being directly shown or taught.

This case study of conducted in a large multi-national healthcare corporation supports two core ideas. First, it demonstrates a field test of strategic human resource development theory of connecting business strategy and the development of expertise in individual employees (see Torraco & Swanson, 1995). Second, it puts forward the idea of process-referenced expertise and demonstrates its utility in a field setting.

References

Bereiter, C., & Scardamalia, M. (1993*) Surpassing ourselves: An inquiry into the nature and implications of expertise*. Chicago: Open Court.

Dubois, D. (1993). *Competency-based performance improvement*. Amherst, MA: HRD Press.

Herling, R. (in-press). Expertise: The development of an operational definition for human resource development . *Human Resource Development Quarterly*.

Holton, E. F. III (1995). A snapshot of needs assessment. In J. Phillips & E. F. Holton III, (Eds.), *In Action: Conducting Needs Assessment* (pp. 1-12). Alexandria, VA: ASTD Press.

Jacobs, R. L. & Jones, M. J. (1995*). Structured on-the-job training: Unleashing employee expertise in the workplace*. San Francisco, CA: Berrett-Koehler

Robinson, A. & Stern, S. (1997) *Corporate creativity: How innovation and improvement actually happen*. San Francisco, CA: Berrett-Koehler.

Swanson, R. A. (1996). *Analysis for improving performance: Tools for diagnosing organizations and documenting workplace expertise*. San Francisco, CA: Berrett-Koehler

Torraco, R. J. & Swanson, R. A. (1995). The strategic roles of human resource development *Human Resource Planning. 18*(4), 10-21.

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Large-Scale Performance-Driven Training Needs Assessment: A Case Study

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This paper reports a case study of an unusual needs assessment project designed to identify the performance improvement training needs of Louisiana state government employees. The project required the development of a hybrid methodology, called large-scale performance–driven training needs assessment, that was more performance oriented than felt needs in large scale applications. The project also highlights deficiencies in needs assessment methodologies that suggest avenues for research.

Louisiana state employees are emerging from a long period during which little funding was available for employee training. This was due to a variety of political and economic factors that have left state employees with a high level of unmet training needs. The current administration has a high priority goal to improve employee training and approached the HRD program at Louisiana State University for assistance in assessing and prioritizing training needs.

The scope of this project presented an unusual set of requirements. The clients needed an assessment that could be used on a large scale and would be linked to performance. Specifically, the LSU HRD program was asked to develop a methodology that met the following criteria:

- could be used with *all* state departments (72,000 employees),
- was linked to performance,
- gave *all* employees opportunity for input,
- could assess needs throughout all of state government in 1 year, and
- could be taught and utilized by state employees after the project.

The purpose of this paper is to report on the methodology developed and the pilot implementation of that methodology. While this situation may seem like a very unique one, the need for performance focused training needs assessment on a large scale may not be. With the current shift in emphasis from training to performance, many organizations with traditional course delivery HRD departments may have a need for a large scale assessment methodology to initiate a performance driven training strategy. The needs assessment literature does not report such methodologies. The methodology and experiences of this case should be useful to other organizations as a way to accelerate their move to performance driven human resource development or working toward a culture in which assessment is more accepted.

Methodology Design

Traditionally, "felt needs" methodologies, which ask employees to simply list or rank desired training courses, have been used to assess needs of large number of employees quickly and to include as many employees as possible. Unfortunately, this approach usually has only minimal success in improving performance. While it can be effective at boosting morale, it is difficult to link such strategies to job outcomes. Effective performance linked needs assessments result from multi-level, multi-dimensional strategies (Holton, 1995).

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Performance analysis, on the other hand, is quite effective at identifying training and non-training interventions that will improve job performance (Swanson, 1994). Unfortunately, these methodologies generally require analysts to work with subject matter experts in each domain, thus making them ill-suited for large-scale application unless enormous resources are available. Traditional training needs assessment methodologies such as job analysis, task analysis or person analysis (Goldstein, 1993, Moore & Dutton, 1978, Sleezer, 1991) are similarly ill suited. Generally, performance analysis is regarded as the most preferred methodology, but was impractical for this project. The state simply did not have the resources or the time to conduct intensive performance analysis for all state offices.

This dilemma is illustrated in Figure 1. The challenge was to devise a methodology that would capture the best of both approaches -- that is, a methodology that could be implemented on a large scale, would include many employees, and would have a high likelihood of improving performance in a meaningful way. While the shift to performance oriented assessment processes is appropriate, there are no methodologies available to conduct training needs assessment on such a large scale as mandated here, *and* target organizational performance improvement as a goal

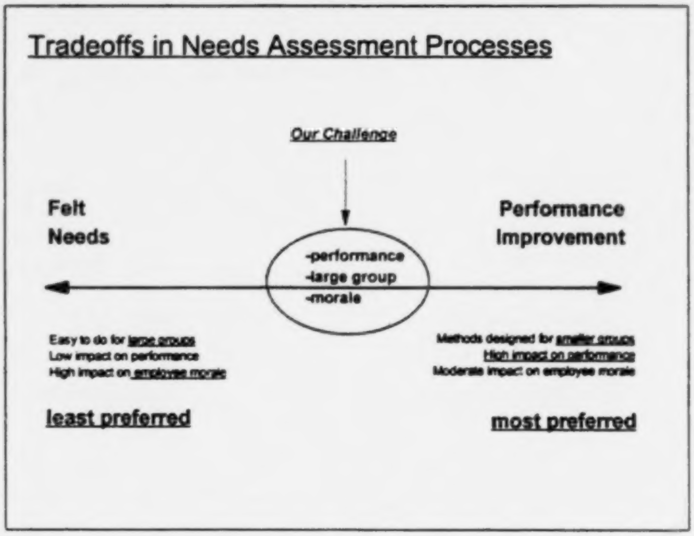
Tradeoffs in Needs Assessment Processes
Our Challenge
Felt Needs
Performance Improvement
-performance
-large group
-morale
Easy to do for large groups
Low impact on performance
High impact on employee morale
Methods designed for smaller groups
High impact on performance
Moderate impact on employee morale
least preferred
most preferred

Figure 1

Large Scale Performance-Driven Training Needs Assessment Methodology

The methodology developed for this project was called large-scale performance-driven training needs assessment: an overview is shown in Figure 2. This methodology followed the discrepancy model of needs assessment: that is, our primary goal was to identify what is and what should be in terms of valued organizational goals or results and prioritize those gaps (Kaufman, 1987). Consequently, the process consisted of two phases; strategic needs assessment and employee perceived performance improvement through training. Phase 1, the strategic needs assessment, was a top-down approach whereby key organizational goals were identified and analyzed in depth to determine appropriate training interventions to support goal accomplishment. For high priority strategic goals, the most advanced performance analysis feasible was conducted, frequently using multiple data collection strategies.

Phase 2, the employee perceived performance improvement opportunities phase, was a bottom-up strategy designed to involve all employees and to identify key "maintenance" type training needs. Emphasis was placed on maximum employee input and also on training needed to improve performance as opposed to training employees would simply like to have.

The assessment outcomes from Phase 1 and 2 were prioritized training recommendations that were performance driven in the sense they were either tied to key organizational goals or addressed an employee perceived opportunity for performance improvement through training.

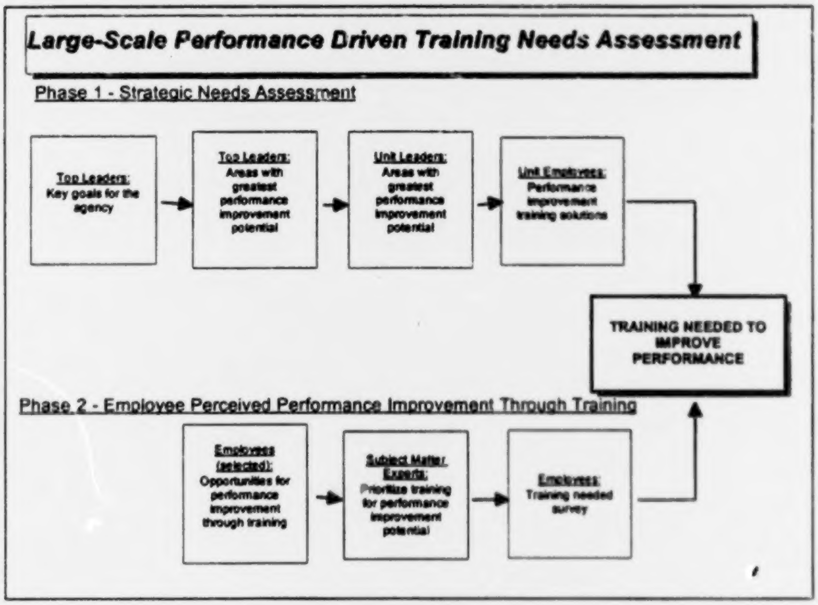
Large-Scale Performance Driven Training Needs Assessment
Phase 1 - Strategic Needs Assessment
Top Leaders: Key goals for the agency
Top Leaders: Areas with greatest performance improvement potential
Unit Leaders: Areas with greatest performance improvement potential
Unit Employees: Performance improvement training solutions
TRAINING NEEDED TO IMPROVE PERFORMANCE
Phase 2 - Employee Perceived Performance Improvement Through Training
Employees (selected): Opportunities for performance improvement through training
Subject Matter Experts: Prioritize training for performance improvement potential
Employees: Training needed survey

Figure 2

Phase 1 – Strategic Performance Improvement Process The first phase of the process was designed to identify and focus on the most important strategic goals for the organization and to employ sophisticated analysis methods to analyze them (see figure 3). The key steps were as follows:

1. Top management in the organization were interviewed to a) identify high priority performance goals, b) performance indicators and c) to identify perceived barriers to accomplishing them.
2. Goals and expected outcomes were summarized in a report for the organization head.
3. Organization head rated each strategic objective as high, medium or low priority. Medium and Low priority goals were not assessed.
4. Unit management and selected employees were interviewed to gain a better understanding of the problem.
5. Full performance analysis methodologies appropriate for the situation were implemented where appropriate. These typically involved multiple data collection methods and were quite intensive.
6. Training recommendations were made.

This top-down approach resulted in top leaders' articulation of key goals and objectives and was a critical step in limiting the range of activities for which input from employees would be solicited. Thus, felt needs and desired training courses could be discounted relatively early in the needs assessment process. The project team could easily distinguish training needs that were compatible with both the organizational goals and potential performance improvement areas from areas that employees simply wanted additional training (i.e., Internet usage, etc.).

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Phase 2 – Employee Perceived Strategic Performance Improvement Through Training

Because phase 2 had to be designed to assess a large number of employees, the survey method was the only logical choice. The key design decision was how to make an employee survey more valid than a felt-needs survey. Conceptually, the project team attempted to replicate the process that might be used if able to conduct focus groups with each group of employees to identify possible performance problems and then survey the entire employee population (see figure 4). Here are the key steps:

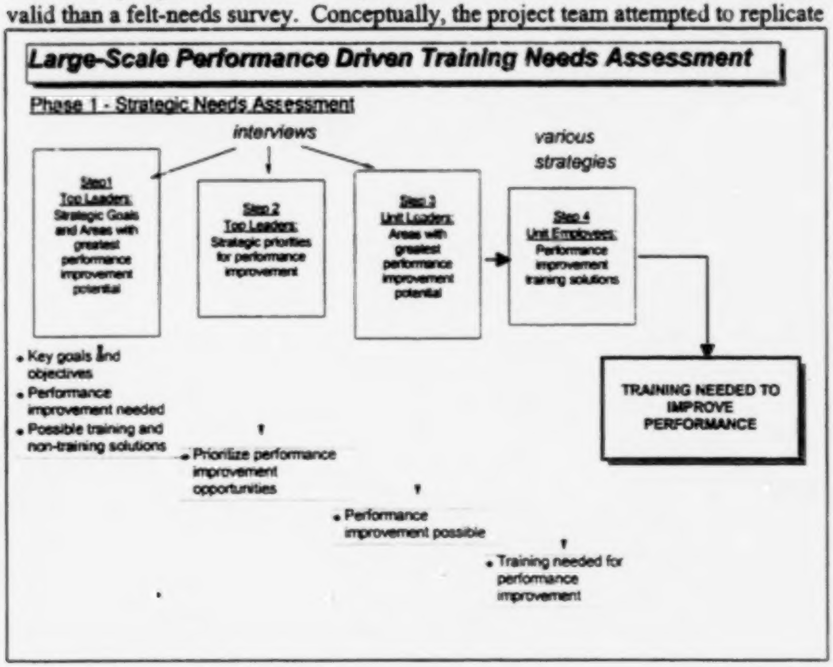
Large-Scale Performance Driven Training Needs Assessment
Phase 1 - Strategic Needs Assessment
interviews
various strategies
Step1 Top Leaders: Strategic Goals and Areas with greatest performance improvement potential
Step 2 Top Leaders: Strategic priorities for performance improvement
Step 3 Unit Leaders: Areas with greatest performance improvement potential
Step 4 Unit Employees: Performance improvement training solutions
TRAINING NEEDED TO IMPROVE PERFORMANCE
• Key goals and objectives
• Performance improvement needed
• Possible training and non-training solutions
• Prioritize performance improvement opportunities
• Performance improvement possible
• Training needed for performance improvement

Figure 3

1. Employees were divided into job groups with somewhat similar tasks (approximately 20 per department).
2. For each employee group, a sample of approximately 20% was randomly drawn and sent a pre-survey form. The instructions on this form were the first key to focusing the employee perception data on performance. They were first instructed to:

   Please describe below the three to five biggest problems you face in your job that keep you from being as productive as you think you could be. Using the boxes provided, rank the problems that you have identified in order of importance.

   Then, they were asked (in separate columns on the form):

   -For each problem noted, please identify any possible training solutions you see.
   -For each problem noted, please identify any possible solutions other than training you see.

3. Three to six subject matter experts from that employee group were then chosen to review the results of the pre-survey. This step was crucial to making sure that employees had not identified low priority issues or overlooked other important items. SMEs reviewed both the performance problems and the proposed solutions.
4. A survey was created using the proposed training solutions (this was a training needs assessment) and distributed to all employees in the group. The instructions on this form were

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the second key to focusing the employee perception data on performance. Employees were instructed to:

For each training topic, please indicate the extent to which your performance would improve if you completed this training (5-point Likert response, "none" to "a great deal").

5. Responses were tabulated and ranked by perceived performance improvement rating.

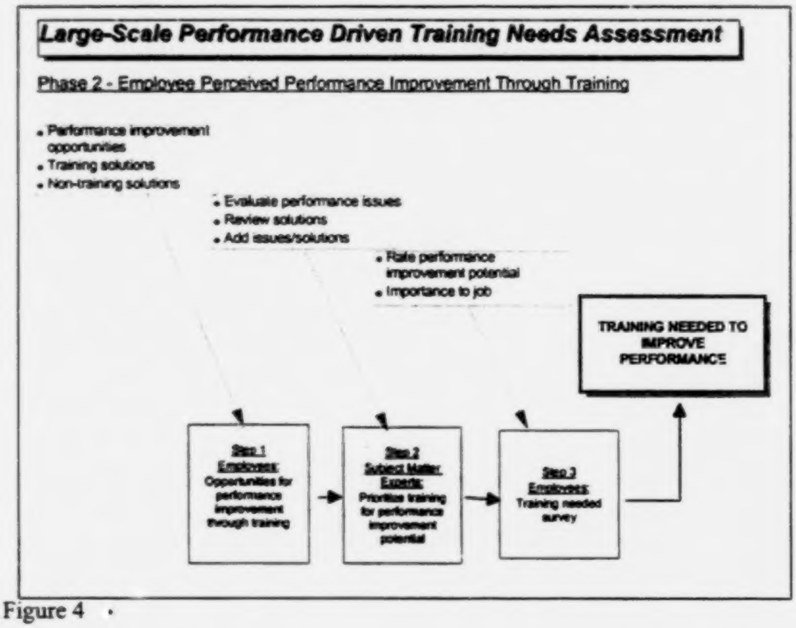
Large-Scale Performance Driven Training Needs Assessment
Phase 2 - Employee Perceived Performance Improvement Through Training
• Performance improvement opportunities
• Training solutions
• Non-training solutions
• Evaluate performance issues
• Review solutions
• Add issues/solutions
• Rate performance improvement potential
• Importance to job
TRAINING NEEDED TO IMPROVE PERFORMANCE
Step 1
Employees:
Opportunities for performance improvement through training
Step 2
Subject Matter Experts:
Prioritize training for performance improvement potential
Step 3
Employees:
Training needed survey

Figure 4 •

Testing the Methodology

This methodology was implemented in two state departments over five months and involved approximately 2,000 employees. Although there was no way to objectively measure its success, there are indicators that it was successful. These include:

1. The process was completed on time and within resource limitations.
2. Phase 1 led to a small set of very high priority organizational goals. Intensive assessment in these areas led to significant training and non-training initiatives, most of which are currently being implemented .
3. There are several indicators that Phase 2 yielded training needs more likely to impact performance:
   - Employees reported many performance problems with no training solutions, suggesting that they were able to use the pre-survey properly. They also reported many non-training solutions to problems, as well as training solutions.
   - The surveys sent to all employees were usually short, containing sets of well-defined training initiatives that tended to focus on specific performance issues, rather than cafeteria style lists of possible training topics.
   - The results from the final survey pointed to an even smaller set of training needs judged by employees to have high likelihood of improving their performance. In fact, this was one problem because managers were accustomed to seeing longer lists of needs.

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Discussion – Lessons Learned

At one level, many of the lessons learned form this project are those that are learned from many quality needs assessment projects (Holton, 1995). Examples include using multiple data collection methods, assessing at multiple organizational levels, the importance of getting buy-in, and getting multiple perspectives on problems. These are not unique to large-scale needs assessment, so they will not be discussed in any detail. Our focus is on lessons learned that are more unique to large-scale applications such as this.

Most of the lessons learned from this project relate to characteristics typical of organizations that have not emphasized training or other forms of human resource development for *such* a long period of time. The same organizational characteristics that created the need for this special approach to needs assessment also created dynamics that made it even more difficult to implement.

Identifying Strategic Goals Was Not Easy Because of budget restrictions, low staffing levels, and other operational barriers. many top and mid-level managers had become accustomed to operating in day-to-day survival mode without conscious thought of future goals and objectives. In other words, these managers were forced to concentrate more of their efforts on meeting the immediate work requirements rather than on forecasting, projecting, and envisioning goals for the future. In other instances, it was evident that top managers had never shared their goals with middle managers. Thus, the goals and objectives expressed by the two groups were sometimes contradictory or incompatible. Both situations forced the project team to deviate from the pre-determined interview questions and "dig deeper" in their efforts to identify strategic goals. Thus, strong facilitation skills were required in this phase of the methodology. This problem was exacerbated by the fact this was a government organization. Many government agencies are not oriented toward strategic thinking, but rather focus mostly on day-to-day operations and service.

Needs Assessment Was Also a Culture Change Process The team failed to fully recognize that the conditions that created the need for large-scale needs assessment also meant that the culture was ill-prepared to support performance oriented needs assessment. It is now obvious that the methodology developed and implemented in this project assumes that the culture of the client organization is conducive to needs assessment processes.

We have modified our approach to integrate organizational change models in our process. For this organization, training needs assessment, particularly of a performance oriented type, was a significant enough culture change that attention had to be given to the change implications. In fact, in many instances the technical nature of the needs assessment was less important than the dynamics of the change process.

Cummings and Worley (1997) suggest five stages of managing the change process:

1. Motivating change
2. Creating a vision
3. Developing political support
4. Managing the transition
5. Sustaining momentum

In organizations changing to performance oriented needs assessment, or renewing a commitment to training, equal attention must be given to these five stages. We have reached a point of essentially operating with dual models—these five stages and the needs assessment models—running parallel in our heads. Needs assessment activities are planned and evaluated using both models, rather than just one.

Training the Client We also discovered that inexperienced clients, such as we had in this organization, were often unable to clearly articulate their goals for the needs assessment. Even though we reached what we thought were clear understandings, when the results were reported, some clients were disappointed that their expectations were not met. After several extensive meetings with the clients, a consensus was reached that what was really needed was client education prior to the needs assessment so they could ask us the right questions.

In phase 2 of this project (ongoing now) we have implemented a combined training/planning process that teaches clients the potential of needs assessment and leads them through a planning process. The planning process helps them develop clearer goals and helps the needs assessors and clients to reach a clearer consensus.

Selling the Process To Employees Because no such task had ever been attempted among Louisiana state employees, and because such a long period had lapsed (under the previous administration) during which few training needs were addressed, employees were understandably skeptical about the process, doubting that their input will be valued or even used. Thus, employees needed reassurance from both the project team and upper management that information obtained from employees would be used to address organizational needs. Statements of commitment from the Governor, department Secretaries, Under Secretaries, department managers, etc. were necessary to ensure that employee feedback would be highly regarded.

In summary, it is quite likely that any organization requiring a large-scale needs assessment such as was implemented here will also share some of these other characteristics. It is vitally important that assessors realize that they are not just engaging in needs assessment, but organizational change as well. If assessors view the situation only through a training needs assessment lens, they will miss critical, powerful organizational dynamics that will hurt their results.

Implications for Research

This case is an excellent lesson in how practice can influence theory and research. There are several core implications for needs assessment research.

Need for More Hybrid Methodologies There is little question that other analysis methodologies could have resulted in superior answers for any particular employee group. If other performance diagnosis processes could have been employed in all groups, training would be more likely to improve performance. It should be equally clear that these methods are too resource intensive for large-scale adoption. A felt needs/survey approach, although well suited to large scale adoption, is largely ineffective at identifying training or other interventions tied to organizational performance goals. We feel strongly that our approach was far superior to a felt needs approach.

It is possible that researchers have been so focused on developing superior techniques, that they have left practitioners with choosing between these two extremes rather than a continuum of methodologies. Hybrid methodologies, such as the one described here, enable organizations to make progress on the journey to performance improvement in a practical way. In this specific case, it is likely that more sophisticated methods could be employed once the initial training needs were met. From a research perspective, the danger lies in assuming that organizations and practitioners can make quantum leaps in their level of sophistication. As new techniques are developed, this case highlights that it is important to also provide a continuum of hybrid methodologies that serve as intermediate steps.

Change Oriented Assessment Models Traditional needs assessment models are static, assuming that users can adopt them in whole. That is, they present a methodology without a path for advancing to it. Researchers who are concerned about seeing advanced practices adopted by practitioners should consider providing a clear path for changing from current practices to the more complete model. This might consist of:

- Layers of elements to identify which components to implement first, second, and so forth.
- Specification of critical versus less critical elements to guide practitioners in making judgements on which compromises to make.
- A series of hybrid methodologies that provide a "stair step" approach to implementing the full methodology.

Organizational Readiness for Assessment There is a temptation to view needs assessment as a technical data collection or research process. Though most texts caution assessors to obtain buy-in and management support, there is still an underlying assumption that the culture and organizational systems are receptive to needs assessment. This case highlights an organization where those assumptions were incorrect. In this instance their culture was not accustomed to assessment in general, as well as performance oriented assessment.

While this case may be a bit extreme, there are likely to be many organizations in which assessment is to some extent foreign to its culture. Researchers need to be more explicit about the assumptions underlying "best practice" methodologies in needs assessment. Then, researchers need to establish guidelines to evaluate an organization's readiness for assessment based on those assumptions.

Models & Best Practices The discrepancy model of needs assessment is one of the most commonly used to identify learning and performance needs in organizations (Kaufman, 1986; Zemke, 1994). It has also served as an important heuristic for diagnosing performance problems in organizations. Needs assessment using the discrepancy model aims to define the gap between a desired 'ideal' state and the current state and to identify and prioritize appropriate interventions to overcome this gap. The discrepancy model was chosen as a foundation for hybrid methodology used in this project based on its presumed ability to meet key project mandates. For example, the functional flexibility of the model made adapting it to a large scale relatively straightforward and made high levels of employee participation possible. Its simplicity also suggested it as a process that could be implemented by individuals with limited needs assessment experience. As a prescriptive needs assessment process, the discrepancy model did not provide for practical alternatives when faced with 1) an organization unable to define strategic goals (i.e., to define the ideal state they wish to attain); 2) employees reluctant to participate in the needs assessment process; or 3) an organizational culture resisting the change implicit in the needs assessment process. In short, our experience supports other criticisms of the discrepancy model indicating that 1) organizational problems are often to complex and ambiguous to be captured by the model and 2) the desired and current states of organizations cannot be easily articulated by the model (Lewis & Bjorkquist, 1992).

References

Cummings, T. & Worley C. (1997). Organizational Development and Change- 6th edition. Cincinatti, OH: Southwestern Publishing Co.

Goldstein, I. L. (1993). Training in Organizations (3rd ed.), Pacific Grove, CA: Brooks/Cole.

Holton, E. F. III (1995). A snapshot of needs assessment. In J. Phillips & E. Holton (Eds.), In Action: Conducting Needs Assessment, pp. 1-12, Alexandria, VA: ASTD Press.

Kaufman, R. (1987). A training needs assessment primer. Training and Development Journal, 41(10), 78-83.

Kaufman, R. (1986). Assessing needs. In National Society for Performance and Instruction, Introduction to performance technology (vol. 1, pp. 1-20). Washington, DC: National Society for Performance and Instruction.

Lewis, T., & Bjorkquist, D. C. (1992). Needs assessment – a critical reappraisal. Performance Improvement Quarterly, 5(4), 33-54.

Moore, M. L. & Dutton, P. (1978) Training needs analysis. Academy of Management Review, 532-545.

Sleezer, C. M. (1991). Developing and validating the performance analysis for training model. Human Resource Development Quarterly, 2, 355-372.

Swanson, R. A. (1994). Analysis for improving performance: Tools for diagnosing organization and documenting workplace expertise. San Francisco: Berrett-Kohler

Zemke, R. E. (1994). Training needs assessment: The broadening focus on a simple concept. In A. Howard, & Associates (Eds.), Diagnosis for organizational change: Methods and models. New York: Guilford Press.

Globalization, Immigration and Quality of Life Dynamics For Reverse Brain Drains

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Globalization and international development in trades and economic growth through human capital accumulation , whether brought about by legal immigration and labor mobility, or by the brain drain and/or even the reverse brain drain effects on the Quality of Life (QOL) have been controversial issues for decades, demo graphically, socioeconomically and environmentally . According to a recent U.N. report, presently more than 60 million people, or about 1.2 percent of the world's population, are not residing in the country where they were born. The impacts of those immigrants on the source and host country's socioeconomic and environmental quality of life (QOL) have been debated heatedly (Bodas, 1994). Since one-third or about twenty million of them are residing in the United States, this paper attempts to study the interdependent QOL effects of those immigrants in the U.S. by country of origin. Special emphasis will be given to those whose social and cultural backgrounds are tied to the Chinese and were borne in Taiwan, R. 0. C. (Liu, et al., 1996).

The brain drains from Taiwan to the US. observed in the 1960s and 1970s were reversed after the 1980s. As a result of these accelerated rate of increase in socioeconomic and professional mobility of human resources -especially the reverse brain drains between U.S.A and Taiwan, R.O.C., this paper employs a balanced QOL model consisting of sectors representing the Laws, Sciences and Arts argues that both countries' QOL have been enriched and human capital stock empowered concurrently. In other words, our findings support those positive educational merits initially observed by Schultz (1961 and 1988) and the comparative advantages recently delineated by Won- (1995) , Carbaugh (1995) Weidenbaum and Hughes(1996), and Sen (1997), etc.

Key Words: Globalization and Migration, Human Resource Management, Quality of Life (QOL) Indicator, Regression Analysis, Brain Drain Effects. Contact: Dr. Ben-Chieh Liu, Institute of International Business, National Don-Hwa University, Hualien, Taiwan, R.O.C. Tel .(03)866-250OXI 75 1 fax (03) 866-1484- E-M:bcliu@cc.ndhu.edu.tw

As pointed out by Liu (1975,19831, 1994), Fox (1983) and Sen (1977,1982,1995), the Quality of Life (QOL) model system offers a standard analytical and measurement framework in managerial economics against which the contributions made by any input factors or technical transformation process such as immigrants or labor mobility to their source and/or host countries may be estimated and compared. Furthermore, the place and role of Quality of Life in economic evaluation and welfare economics have been ascertained and reaffirmed by Sen (1997) recently. In Liu's earlier work (1975), the QOL concept, whether state- or context- dependent was described as follows:

"Quality of life (QOL), admittedly, is a very subjective expression of an individual's sense of well-being. In a very real sense it expresses that set of "wants" which, when taken jointly, makes the individual happy or satisfied. However, human wants rarely reach a state of complete satisfaction, except possibly for a very short time: as one want is satisfied, another rises immediately to take its place. As a result, the concept of QOL varies not only from person-to-person, but also from place-to-place and from time-to-time. Interest in the development of QOL measures grew remarkably during the 1960's because such measures are essential to assessment of

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many aspects of social progress and social accounting, and are useful for national goal-setting, program evaluation, and priority ranking.

Concerning the composition of QOL framework, Liu further stated:

"Most people approach "quality of life" with varying preconceived definitions, but it may be considered here as an output of two aggregate input factors: physical and spiritual. The physical input consists of quantifiable goods, service, material wealth, etc., while the spiritual input includes all nonmeasurable, psychological factors such as community belongingness, esteem, self-actualization, love, affection, etc. Although the production function expressing the relationship between output and input factors of QOL is known to be enormously complex (there are as many such factors as there are people), an aggregate homogeneous production function may be assumed for the community as a whole. Since psychological inputs are not quantifiable, the QOL output may be taken at a particular point in time as a positive function to those quantifiable, social, economic, political and environmental inputs."

Operating and functioning under various constraints, the three sectors of the QOL model, -- Law, Scientific Thought, and Affective/Artistic Thought, are shown in Figure I below. By motivating or constraining human behavior, these three interdependent sectors-legal systems or codes of the Governing body (The LAWS), scientific-rational thinking (The SCIENCES), and affective or artistic elements that sustain human relationships (The ARTS) -- form the quality-of-life (Q.O.L.) inner circles which interact with other QOL components, such as political, business and environmental conditions and institutions to organize and shape the linked structural relationships among, these state- and context-dependent quality sets or components.

A simplified visual representation of the QOL framework consists of a triangle , the sides of which represents the three types of relational and functional factors that jointly determine the overall QOL in the circle as shown in the figure. One may even describe the area within the triangle as actually achieved or realized, and the area within the circle in which the triangle appears as the potentially desired and optimally expected maximum outcome, indicating that the ratio of actual to desired results Is always less than unity. However, the ratio between the triangle and the circle embodied becomes larger and more equally distributed as the input to output transformation process becomes more efficient and effective institutionally and theoretically as described under the General X-Efficiency theory postulated by Leibenstein (1979).

Within this triangle-shaped model, linkage of legal, scientific and human-relation elements appears identical for both Western and East Asian decision makers, regardless whether the underlying quality concepts are generated and/or transformed through the state-dependent or the context-dependent functional relations (Liu et al., 1996 and 1997) as shown in Figure 2. Some similar thoughts on quality transformation and value determination from Hofstede (1993) and Tversky and Kahneman (1991) are also reflected and shown in Figure 2. Overall, all decision makers would agree with the delineation of elements and structure represented in the QOL framework, and the importance of these elements in evaluating, and measuring business success and/or personal satisfaction and happiness. Nonetheless, the weights and priorities assigned to each segment will differ remarkably depending on whether the decision maker is Western or East Asian. For example, the legal segment of elements was given the highest priority and human relationships the lowest by Westerners, with the opposite being true for East Asians: a clock-wise versus a counter clock -wise moving relationship.

This is particularly true in mainland China - a main focus of analysis in The Bamboo Network (Weidenbaum and Hughes, 1996) - where Guanxi , or Yuan play a much more critical role in business dealings than laws or legal systems from the viewpoint of the Chinese businesspersons or the expatriates, whether the business in question is the smallest family operation or the largest multinational corporation.

Liu's earlier work (1975; 1983) and Liu, Mulvey and Hsieh's later research (1986) originally focused upon quality-of-life-based motivation for migration of labor within the United States. This paper represents another step in applying some of the familiar socioeconomic variables, (Schultz 1961 and 1988)-- particularly educational attainment and occupational status which were used to measure motivation for migration, to the measurement of the effects of immigrants to the US by country of origin, with special emphasis on those legal immigrants from Taiwan, R.O.C. Stepwise regression techniques are employed and some econometric problems such as the double counting procedures and the missing observations are discussed. The social-cultural impacts on income or Q.0L distribution among legal immigrants and the reverse brain drains in the U.S.A. and Taiwan are reassessed, respectively (Liu, et al., 1996 and 1997)

Applying the QOL Model for Assessment

Borias' (1994) work, which focused on the problems of illegal and legal immigration, changed perceptions of the facts that long dominated the discussion over the significant socioeconomic benefits brought about by, and the negligible employment opportunity lost to, the immigrants. Perceptions changed because the demographic mix of immigration was radically altered during the 1980s and the combination of social security and welfare burdens plus the budget deficit led to a worsening situation for several administrations in the US. For example, in fiscal 1996, Federal income in the U.S. was $1355 billion and outlays were $1599 billion, of which 36% was spent on social security, medical care and other entitlement programs, leaving of a deficit of $164 billion.

The historical and demographic changes in the size, ethnicity and national origin mix, cultural and educational composition as well as professional skills associated with the immigrants, legal or illegal, have posted new questions, issues and perceptions concerning the overall social well-being or Q.0.L. in both host and source countries. Those concerns are further exemplified vividly in recent U. S. elections and campaign debates, as well as shown in the welfare reform and get-tough House/Senate bills to reduce federal budget deficits by cracking down on illegal immigrants and curtailing welfare and benefit payments available to legal immigrants. For example, a historic welfare reform bill that requires recipients to work and ends some of the federal public assistance guaranteed since the Depression Era was signed into law by the US President recently.

For the first time since the turn of the century , the United States in 1989 welcomed more than I million immigrants in a single year. The immigration record was set in 1990 when more than 1. 5 million entered the U.S. It was estimated that in the 1980s roughly 75 percent of the Asian and Pacific Islander 01rowth and 50 percent of the Hispanic growth was due to immigration. These changes have occasioned the emergence of unique problems for new populations or those associated with them as far as their overall QOL are concerned. The fact that "Asian Americans are subject not only to xenophobia based on color and different appearance, but also to the negative implications of some of others success," was documented in an executive summary report -- Racial and Ethnic Tensions in American Communities, issued by the Commission on Civil Rights (1992). It is also noted that in the report on the roundtable discussions of Asian civil rights issues published by the Commission in 1988, that "Asians have been denied rights considered basic by most Americans" throughout much of their history in the United States.

Income, Education and Employment: The Linkages

The primary objective of this paper is to investigate some cultural, socioeconomic and environmental impacts in the States as brought about by all LEGAL immigrants and in particular, by all Chinese American immigrants. Among the 20 million foreign-born population in the U.S. in 1990, there were 530,000 from the Chinese Mainland, 244,000 from Taiwan and 147,000 from Hong Kong. Out of the immigrants 25 years and older, Chinese-Americans from Taiwan ranked first in educational attainment with 91.6% high school graduates (60.6% for Mainlanders and 83% for Hong Kong), far exceeding the total average of 58.8 for all immigrants and the U.S. rate of 78.4%. For college graduates, Taiwan's 62.2% ranked second, only slightly behind India (64.9%), but far exceeding the aggregate immigrants' average of 20.4% and that of 30.9%, 46.8% and 21.4% for mainland China, Hong Kong and the U.S. as a whole, respectively.

As a result, most of the Chinese immigrants from Taiwan were engaged in professional occupations with higher earnings and far better median household incomes than the average immigrants: 28.7% versus 123% in professional specialties and $38,966 versus $28,314 for average household income (the comparable figures for immigrants from the Chinese Mainland and

Hong, Kong are 16.9%/22,5%, and $330,597542,033, respectively -- much higher than the US median family income of $29,943).

As far as the immigrants inclined to apply for social welfare-those 65 years old or over-- are concerned, Hong Kong (1.9%) and Taiwan (2.4%) were the lowest two, next only to Thailand's 1.1%, and far below the US average of 12.6%, and all legal Immigrants' average of 13. 6% and mainland China's 17.9%. See Table I for details.

Empirical Results Reestimated

Results from our step-wise regression models shown in Table 2 indicate that education expressed by percentage of college graduates (PCU) is, as expected, the prime factor contributing to a higher percentage of professional employment (PRO) which in turn generated higher median family income. Using median family income as the dependent variable, Equations (1), (3), (4), (7) and (8) in Table 2 clearly illustrated the synergistic relationship between these two independent variables. Legal immigrants from Asia in general and those from India, Taiwan and Hong Kong, in particular, have uplifted others in raising their family income and/or producing better employment opportunities or professional and social mobility in the US.

Quality of Life (QOL) or social well-being in this country has been enriched considerably by education as pointed out by Liu (1981), Hsieh and Liu (1983) and Liu, Mulvey and Hsieh (1986), among others. As expected, highly educated immigrants who acquired professional and technical skills either before or after they enter this country, have undoubtedly made significant contributions to this country's socioeconomic well being (Schultz 1961 and 1988). However, the "Painful Figures" for the immigrants reported by Daves (1996) should not be over looked and the impacts of the immigration bill targeting, legal should not be underestimated.

The percentage of immigrants who are 65 years old and over (P65) has apparently adversely affected the median family income. So is the variable of late arrival-percentage of immigrants coming to this country between 1980 and 1990 (PEA80) as the "huddled masses"-- showing statistically significant negative impacts on median family income. These two variables jointly represented a decline in the supply of skilled and needed work force and a sharp increase in demand for public aid and assistance in education and welfare. Although the (size) variable showed negative impact on family income as expected, the results are not statistically significant. This is also true for two other variables-- percentage of immigrants engaging in labor (PLO) and service (PSO) jobs.

Using a step-wise regression model, results shown in Table 2 are quite encouraging, as far as its sensibility and predictability in variable selection and explanatory power are concerned (Ramanathan, 1996). By eliminating such aggregate categorical data for Europe, Asian, Caribbean, Central America and South America, our results show that variations in regression coefficients estimated are more significant and coefficients of determination (R^2) are higher than 0.73 and uniformly consistent across equations than previously estimated by us (Liu, et al. 1996).

Concluding Remarks: The Reverse Brain Drain Effect

The characteristics of immigrants arriving after 1980 are much different from the average of all immigrants in that they are younger and are making much less average annual income than that of the US as a whole, despite the fact that the percentage of college graduates is still higher for those 1990s immigrants aged 16 and over- -23.2% of them were college graduates versus 19.9% for the US and their annual earnings in 1994 were $8,500 versus $15,170, respectively. Further, recent immigrants are concentrated in California--31.1 % of 1990s immigrants versus 11.9%of the overall population, followed by New York, Florida and Texas (Card, 1996).

Adjusting for broad occupational and industrial categories, American born Asian men with high levels of schooling were found to earn less than comparable non Hispanic white men. The 1988 Civil Rights Commission report clearly stated that "It thus appeared that extensive formal schooling enables Asians to enter high-paying occupations and industries, but within these occupations and industries, Asians are underrepresented in higher paying positions" (p. 1) These findings on Glass ceilings should reject the conventional explanations that Asians are recent immigrants and they lack complete English proficiency, since the findings hold even for those Asian men who were born and raised in America.

Political implications regarding constantly rising, federal budget deficits and welfare program loopholes and abuse are clearly illustrated and vividly reflected by the passage of California's "Proposition 187" ballot with a wide margin at the state/local level, and the US House and Senate's 1996 "Immigration Reform" bills which were approved overwhelmingly to limit welfare and subsidy payments to BOTH legal and illegal immigrants at the federal level. Issues between legal and illegal immigrants are further complicated by the welfare reform bills and the fact that "Immigration bill targets legals, too" was well reported (Jacoby, 1996).

As Lee, Liu and Wang (1994) and Liu, Lee and Hu (1996) have pointed out, success in education and human capital accumulation along with reverse brain drain returned from the US to Taiwan in the eighties have added significantly to the capital stock of Taiwan. The return of US trained scholars, engineers, scientists and professionals also jointly created the major socio-economic and democratic achievements as recently observed in Taiwan. Concomitantly, this paper also concluded that to explain superior Q.O.L. attainment such as has been achieved in the US by Asian immigrants in general and those from Taiwan in particular, one must recognize the dynamic and reinforcing role of higher education in human capital development that took place in their homeland or after their immigration to the States - the host country. Globalization facilitated by the movement of empowered and skilled labor or highly educated human-capital resources have undoubtedly enriched the overall QOL in both host and source countries either as a consequence of the original "brain drain" or as its subsequent reversal. In other words, our findings on the mutual benefits brought about by the reverse brain drains of legal immigrants, especially those from Taiwan, ROC are as encouraging and appealing as highlighted by Wong in his book, *International Trade in Goods and Factor Mobility (1995) Statistical data on geographic distribution of US civilian labor force and unemployment and, Chinese Scholars and college students from Taiwan by state are contained in Table 3.*

According to Carbaugh, we further noted that the capital and information resource movements between the Silicon Valley in California and Industrial Park in Hsinchu, Taiwan have reaffirmed our findings:

"The infusion of foreigners into the United States during, the 1980s-1990s, however, did not include only people with minimal skills and minimal education. Enjoying the benefits of a foreign "brain dean", the U.S. reaped a bonanza of highly educated newcomers who enhanced the competitiveness of its companies. America's high-tech industries, from biotechnology to semiconductors, increasingly depended on immigrant scientists, engineers, and entrepreneurs to remain competitive. In Silicon Valley, the jewel of U.S. high-tech, and knowledge of how things get done overseas, immigrants also contributed to the export of Made-in-U.S.A goods and services. Moreover, they helped revitalize America by establishing new business and generating jobs, profits, and taxes to pay for social services. The infusion of mew people into the United States thus helped improve the globally competitive top half of its economy. These benefits must be weighed against the economic disruptions caused by the infusion of less-educated and less capable people into the nation." (Casbaugh 1995, P.300)

References

Borjas, George. "Economics of Immigration", *Journal of Economic Literatures*, 1994.

Carbaugh, Robent J., International Economics (Cincinnati: South-Western Publishing. Co., 1995)

Card, David. "Immigration and Ethnicity Forums" *Summary Report*, Vol. 5, No.3), Summer 1996, The Jerome Levy Economics Institute, Bard College, Annandale, N.Y.

Daves, Bob. "Painful Figures," *The Wall Street Journal*, 4/26/96.

Fox, K., "The Geo-Behavioral View of Human Societies and Its Implications for System Science," *International Journal of Systems Sciences*, Vol. 14, No. 6. 1983.

Hofstede, Geert, "The Cultural Dimensions in People Management: The Socialization Perspective" in V. Puck N.M. Tichy and C. K. Barnett (eds.), Globalizing Management (N.Y. - John Wiley and Sons, 1993)

Hsieh, C. T. and B. C. Liu, "Quality of Social Life as a Factor in Migration". The *American Journal of Economics and Sociology*, Vol.42 No.4, October, 1983, PP. 431-440.

Jacoby, Marry, "Immigration bill targets legals, too," *Chicago Tribune* , 9/25/96.

Kobrin, S. T. "Expatriate Reduction and Strategic Controlin American Multinational Corporations"

Lee, Maw Lin, Ben C. Liu and Ping Wan,--, "Education, Human Capital Enhancement and Economic Development," Economics of Education Review, December 1994.

Lee, M. L. B. C. Liu and Ping Wang "Growth and Equity with Endogenous Human capital: Taiwan's Economic miracle Revisited," *Southern Economic Journal*, October, 1994.

Leibenstein, Harvey, *General X-efficiency Theory and Economic Development*, (London: Oxford University Press, 1978)

Liu, Ben C. M.L. Lee, and Chien-Pine, Hu, "Quality of Life Indicators and Immigration Planning and Distributinal Decisions," in Energy, *Environment and the Economy*, R. Kleindorder, H. C. Kunreuther and D. S. Hong (eds.), Edgar Pub., 1996.

Liu, Ben C. "Differential Net Migration Rates and the Quality of Life", *Review of Economics and Statistics*, August 1975, pp. 329-337.

Liu, Ben C. "Differential Net Migration Rates and the Quality of Life: Review and Revisited", *Review of Economics and statistics*, 1983.

Liu, Ben C., T. Mulvey and C. T. Hsieh. "Effects of Educational Expenditures on Regional Inequality in the Social Quality of Life", *The American Journal of Economics and Sociology*, Vol. 15, No. 2, April 1986, pp. 131-144.

Liu, Ben C, M. L. Lee, S. J. Lee and W. Crawford , "Income, Education, Employment and Immigration". *Industry of Free China*, July 1996, pp.83-90

Liu, Ben C, W. Crawford and M. L. Lee, "Globalization and Legal Immigration: Liabilities or Assets", *Proceedings of 3rd Annual International Conference of Human Resourcement in the Asia-Pacific Region* (Kaohsiung: National Sun-Yat Sen U, November 25-26, 1996)

Liu, Ben C. et al, "Globalization and Legal Immigration: Liabilities or Assets Revisited" Paper presented in the 1997 *International Management Conference. Society for Advancement of Management* (Las Vegas, March 23 -25, 1997)

Liu, Ben C. and W. Crawford, Book review on *The Bamboo Network: How Expatriate Chiness Entrepreneurs are Creating a New Economic Superpower in Asia, in Hong Kong Journal of Business Management*, (Hong Kong: The Chinese U. Press, Vol. XIV, 1996), PP.98-102.

Myers, Ramon, "Confucianism and Economic Development: Mainland China, Hong Kong, and Taiwan," in Yu and Lee(eds., 1995)

Schualtz, T. W., "Investment in Human Capital," *American Economic Review* 1961, vol.51, 1-17.

Schualtz T.P., "Expansion of Public School Expenditures and Enrollments: Intercountry Evidence", *Economics of Education Review*, 1988 7(2), 167-183.

Sen, A. K. *On Economic Inequality, Oxford: Clarendon Press.* (1973a)

Sen, A.K. "On the Development of Basic Income Indicators to Supplement GNP Measures," *United Nations Economic Bulletin for Asia, and the Far East*, 24. (1973b)

Sen, A.K. "On Weights and Measures: Informational Constraints in Social Welfare Analysis, *Econometric*, 45; (1977) reprinted in Sen (1984).

Sen, A.K. *Choice, Welfare and Measurement*, (Oxford: Basil Blackwell., 1982)

Sen, A.K. "Well-being, Agency and Freedom: The Dewey Lectures 1984," *Journal of Philosophy*, (82, 1982)

Sen, A.K. *Inequality Reexamined*, Oxford: Clarendon Press, (Oxford, and Cambridge, MA: Harvard University Press, 1992a)

Sen, A.K. "Internal Consistency of Choice," *Econometric*, (61; 1933a)

Sen, A.K. "Rationality and Social Choice," *American Economic Review*, (85; 1995)

Sen A.K. *On Economic Inequality Expanded Edition*, (Oxford: Clarendon Press, With an Annexe Jointly with J.E. Foster, 1997)

Ramanathan, Ramu, *Introductory Econometrics* (The Dryden Press, 1996).

Weidenbaum, Murray and Samuel Hughes, *The Bamboo Network: How Expatriate Chinese Managers are Creating a New Economic Superpower in Asia* (Free Press, 1996)

Wong, Kar-Yiu, *International Trade* in Goods and Factor Mobility (Cambridge: NUT Press, 1995)

Tversky, Amos and Kahneman, Daniel, "Loss Aversion. in Riskless Choice - A Reference-Dependent Model," *Quarterly Journal of Economics* (106; 1039-1061, NOV. 199 1)

Yu, T.S. and J.S. Lee (eds.) "Confucianism and Economic Development (Taipei: Chung-Hua Institute for Economic Research, 1995).

Employee commitment in changing organizations: an exploration

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Commitment of employees can be an important instrument for improving the performance of organizations. Based on international literature and studies, commitment has been defined as organizational and task commitment, and is related to personal, job and organizational characteristics. This survey intend to explore some important relations between the characteristics, commitment and organizational effects. Between commitment and the level of the organization the most important relations are a better communication and less illness. At the level of the individual employee the commitment to change and to take part very active in change processes, bringing up new ideas. These conclusions are in line with the literature. Commitment is strongly connected with colleagues and the style of management and could be seen as an important asset of the learning company.

1. Commitment: problem statement and theoretical framework

Employees in modern "learning" organizations are more and more expected to display effort, motivation and initiative. The success of an organization depends not only on how the organization makes the most out of the human competencies, but also how it stimulates commitment to an organization. Employee commitment together with a competent workforce seems to be of decisive importance for an organization to be able to compete in quality and to go along with changes. The skills needed in organizations have changed in the last 15 years mainly as a consequence of new technologies and automation. Newer concepts of organizations based on creativity and learning concepts are emerging and will require more responsibilities of employees (Nonaka & Takeuchi, 1991; Senge, 1990). This might lead to more demands and differences in job satisfaction. From a study in Britain (Gallie & White,1993) we learned, that employees that participated more in decisions about the organization of work were more satisfied than those that had low levels of participation (o.c. p. xi). Whether employment commitment is affected by external or internal factors is part of the British study. We are mainly interested in internal factors, because these factors can be handled by organizations themselves. Therefor, we wanted to investigate whether and how employee-commitment in changing organizations is affected by internal and external factors, and in the effects of commitment. When companies are rather stable this commitment might be different from organizations under pressure of mergers, re-engineering and downsizing. This study is aimed to answer the following questions: What affects employee commitment and what are the effects of employee-commitment?

Definitions of commitment

Morris, Lydka and O'Creevy (1993) state that 'it is commonly noted that consensus over the definition of commitment does not consist'. Mowday, Porter & Steers (1982) define commitment as 'the relative strength of an individuals identification with and involvement in a particular organization'. They mention three characteristics of commitment: a believe in and acceptance of the values of the organization, a strong willingness to take effort for

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the organization and the desire to remain with the organization. These three characteristics show that commitment is not only an attitude, but also a behavior. Most studies on commitment focus on the organization as a whole. In some cases a distinction is made between organizational commitment and task commitment (Peeters and Meijer, 1995). Gallie and White (1993) use the term organizational commitment to refer to acceptance of organizational values and to the willingness to stay. Task commitment refers to the effort one puts in his work. Organizational commitment and task commitment are combined in the definition of commitment that is used in our study, where commitment is defined as 'a sense of loyalty to and identification with the organization, the work and the group to which one belongs. This feeling is expressed in the motivation to bring effort into one's work, the motivation to take responsibility and a willingness to learn. A precondition is that the employee is well informed and is involved in decision-making processes'.

Characteristics affecting commitment

Mowday et al. (1982) suggest four categories of variables affecting commitment: personal characteristics, job characteristics, work experiences and structural characteristics that are most frequently mentioned. In other studies different categories are used. The categories personal characteristics, job characteristics and organizational characteristics will be described here:

Personal characteristics

In general personal characteristics do not appear to play a large role in determining commitment (Morris et al., 1993). Personal characteristics that are frequently studied are age and level of education. It is suggested that younger employees are more committed than older employees, because they are highly motivated to start a career and able to cope with change, whereas older employees are less committed because they are often disappointed (Morris et al., 1993). On the other hand are older employees, who have worked many years for the organization, do have a strong attachment to the organization. Gallie and White (1993) found that higher educated employees have a higher *task commitment*, while a higher level of education opens more possibilities to do the work that you like. In studies that focus on *organizational commitment* however, a small negative correlation is found between level of education and commitment (Mowday et al., 1982).

Job characteristics

From many studies it is concluded that job characteristics are the most important to predict commitment (Peeters and Meijer, 1995; Gallie and White, 1993). Allen and Meyer (1990) found that factors that contribute to job challenge are highly correlating with commitment. Walton (1985) focuses on employee involvement, the combination of doing and thinking in a job, and individual responsibility. This form of work design is what Lawler, Mohrman and Ledford (1995) call 'the high-involvement approach'. The high involvement approach relies on employee self-management and participative management styles, where employees at all levels are given the authority to influence decisions considering their own work. Parker, Mullarkey and Jackson (1994) note that 'such high involvement practices not only help to build employee commitment, but they also foster their development. It is this emphasis on cultivating learning throughout all levels of the organization which shows promise of becoming the critical skill that will determine competitiveness in the future'. Elements of the high involvement approach are found in the job characteristics investigated by Biessen (1992), who based his study on a model of job characteristics by Hackman and Oldham (1982). Some of these characteristics are variety in tasks, autonomy, and job interest.

Organizational characteristics.

According to Mowday et al. (1982) decentralization and participation in decision-making are the most important organizational characteristics that influence commitment. Walton (1985) suggests that commitment will increase in a flat organization where coordination and control is based more on shared goals than on rules and procedures and where employee participation is encouraged.

An important characteristic is the style of leadership. Peeters and Meijer (1995) found a correlation between the social support of the leader and commitment. In line with the high-involvement approach is participative leadership, where employees and managers cooperate in decision making. An open communication is necessary and the employees are encouraged to come up with new initiatives.

Human resource policies are also considered as an organizational characteristic. Good career prospects and possibilities for further training and education are found to be related to commitment (Caldwell, Chatman and

O'Reilly, 1990: Morris et al., 1993; Gallie and White, 1993). There is no agreement on the influence of the level of salary on commitment. Gallie and White (1993) found no relationship between salary and commitment, but Morris et al. (1993) found that a good salary has a small positive influence on commitment.

2. Effects of commitment

Earlier studies of commitment focus on the effect of commitment on employee-turnover (e.g. Mowday et al., 1982). However, in the words of Allen and Meyer (1990), '....what employees *do* in the job is as important, or more important, than whether they remain. It turned out to be difficult to get empirical evidence on the effects of commitment. The most important reason is that it is difficult to measure a direct relationship between e.g. the profit of the organization and commitment, because there are to many intervening factors (Van Breukelen, 1996). Lawler et al. (1995) choose to measure the effects as perceived by managers. They conclude that commitment (and involvement) have positive effects on, among other things, productivity, quality and competitiveness. They also found, like Gallie and White (1993) that committed employees are more satisfied.

On the bases of the preceding analysis a research model is set up that can be used for designing research instruments, formulating relationships, and for testing hypothesis. In the end the model can be used for validation and model testing. In this stage of research, however, the model has a heuristic character and will be used for exploring relationships.

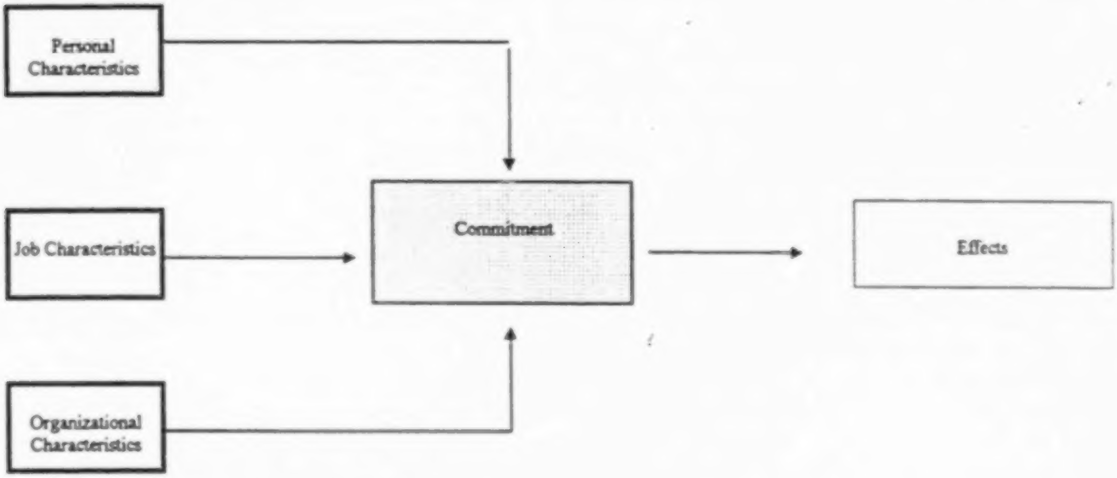

Figure 1: The commitment-effect model

3. Methodology

On the basis of the literature, the model and existing instruments a new questionnaire was constructed with the following aims:

1. to measure employee commitment;
2. to investigate which factors influence commitment;
3. to make an inventory of the activities that organizations use to stimulate commitment;

Sample and response

The questionnaire was sent to a random sample of 4250 human resource managers of organizations in the Netherlands from a database with 10.000 respondents. Of these questionnaires 290 were returned. Although this is a very low response rate (7%), the sample is representative for all types of organizations in The Netherlands, and the distribution over the different branches of organizations equals the real situation for the greater part. Also the number of larger and smaller organizations are represented in a reliable way. But we would like to stress that because of this low response rate the results should be interpreted with caution.

Instruments

There are many scales to measure *organizational commitment*. The most well-known are the organizational commitment questionnaire (OCQ) by Mowday et al. (1982) and the affective organizational commitment scale (ACS) by Allen and Meyer (1990). Gallie and White (1993) use a questionnaire that is based on the ACS, but they added some questions to measure 'task commitment'. This questionnaire is the most suitable for our purpose, because it is relatively short and it measures both organizational and task commitment. A disadvantage is that the questions in all these scales are directed to employees. Our purpose, however, is to measure employee commitment as perceived by managers. So the scale is adjusted and translated for this group. The scale consists of eight items. Cronbach's alpha was 0.82, which is quite satisfactory.

The measurement of commitment

Existing scales to measure antecedents of commitment have the same disadvantage as mentioned above, namely that they are directed to employees instead of to their managers. So again existing items were adjusted for the target group. The factors are categorized in personal, job and organizational characteristics according to figure 1 and listed in table 1. Items to measure job and organizational characteristics are derived from the BASAM (BASic questionnaire Amsterdam; Biessen, 1992). Most characteristics were measured by only one or two items. Cronbach's alpha is not calculated for these items. Originally a scale of five items was constructed to measure teamwork. A principal components analysis showed that this scale consists of two different scales. The first scale measures 'teamwork', that is whether employees work in teams or individual. This scale consists of two items. (Cronbach's α is 0.55).

Table 1: Variables affecting commitment

Personal characteristics	
Level of education	
Age	
Job characteristics	
Interest	The interest of the job as experienced by the employee
Variety	Variety in tasks and the use of a wide range of skills and knowledge
Autonomy	Possibility of taking own decisions on how to do the task
Feedback	Feedback from the results of the task
Teamwork	Working in teams
Collegiality	Cooperation and social climate among colleagues
Work environment	Physical conditions of job and work environment
Mental load	Mental load (difficulty, responsibility) of the task
Work pressure	Pressure to get the work done in time
Organizational characteristics	
Size	Number of employees
Leadership style	Extent of participative leadership
Height of salary	Relative height of salary
Career prospects	Attention for career wishes of employee
Possibilities for further education	Possibilities of training for employees

The second scale measures the amount of loyalty and cooperation between colleagues. This scale is mentioned 'collegiality' and consists of three items. (Cronbach's alpha is 0.60). An organizational characteristic under investigation is the leadership style in the organization. The leadership-scale consists of seven items. (Cronbach's alpha is 0.79).

The measurement of effects

To measure the perceived effects of commitment the respondents were given a list of possible effects. They were asked to mark the most important effects that they found in their organization, and to add effects that were not listed if necessary. (In this paper these results are not taken up).

Activities to stimulate commitment

A list of twelve possible activities or interventions to foster commitment was given. The respondents were asked to mark an activity that they carry out in their organization and to add activities that are not on the list.

4. Results and conclusions

The response on the survey was a handicap to carry out a validation study or model test. In stead of this a correlation analysis was carried out between commitment and the different variables. On the basis of these correlations we can perceive whether the relationships are in line with former studies in Britain and the Netherlands. In this case managers of changing organizations were the respondents in stead of employees themselves.

Commitment

The results show that in the perception of managers employee commitment in general is quite high. The mean score is 4.0 ($S_d = 0.58$) on a scale from 1 - 5. In Table 2 an overview of correlations is given.

Personal Characteristics

No strong relationships are found between personal characteristics and commitment. It should be noted here that this study concentrates on the *average* age and *average* level of education of all employees of a company as indicated by the managers. Commitment is strikingly low in organizations with employees with an average age between 41 and 45. Comparable results are found by Boerlijst et al. (1995). In addition, 30% of the respondents believe that younger employees invest more in a company than older employees, especially during organizational changes.

Job characteristics

As expected, job characteristics correlate strongest with commitment. The most striking correlation is found between commitment and collegiality (r = 0.64). Peeters and Meijer (1995) found a weaker correlation between social support of colleagues and commitment. De Korte and Bolweg (1994) conclude from a qualitative study that the atmosphere in a team affects commitment. Working in teams, rather than working individual, also goes together with higher scores on commitment (r = 0.33). Other important correlations with commitment are job interest (r = 0.40), variety (r = 0.35), autonomy (r = 0.23), and feedback (r = 0.29).
It is striking that the average scores on these characteristics are relatively low. This means that a lot of improvements in commitment can be made when more attention is paid to these factors. The mental load of the job has neither a positive nor a negative correlation with commitment (r = 0.01), but work pressure has a moderate strong positive relationship (r = 0.33). We presume that a certain amount of work pressure makes the job more challenging and therefore leads to higher employee commitment.

Organizational characteristics

We found the leadership style to be the second most important correlation of commitment (r = 0.53). The size of the organization hardly affects commitment (r = 0.14), although in smaller organizations commitment in general is a little bit higher. Human resource policies as the attention that is given to individual career prospects and the possibilities for further education turn out to have a moderate correlation with commitment (r = 0.29 and r = 0.25). In most organizations that took part in the study, the salaries are similar to salaries in comparable organizations. No meaningful correlation between the height of salary and commitment was found.

Effects of commitment

The main effects of commitment as reported by managers are improvement of quality and client-centeredness, improvement of organizational communication and a larger willingness to change. These effects are mentioned by more than 50% of the respondents. In table 3 the effects are listed in three categories: effects on the level of work-processes, effects on the level of organization and effects on the level of employees.

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Table 2: Means, standard deviatons and correlations for variables affecting commitment

	Mean[1]	Std. Devi	Correlation[2]
Personal characteristics[3]			
Level of education	-	-	0.15*
Age	-	-	-0.17*
Job characteristics			
Interest	4.32	0.67	0.40**
Variety	3.42	0.74	0.35**
Autonomy	3.65	0.87	0.23**
Feedback	3.09	0.98	0.29**
Teamwork	3.45	0.91	0.31**
Collegiality	3.68	0.63	0.64**
Work environment	3.79	0.82	0.23**
Mental load	3.11	1.09	0.01
Work pressure	3.94	0.73	0.33**
Organizational characteristics			
Size	-	-	-0.14*
Leadership style	3.57	0.51	0.53**
Height of salary	2.91	1.15	0.04
Career prospects	3.57	1.09	0.29**
Possibilities for further education	3.68	1.21	0.25**

1: Mean score on scale with 5 = high and 1 = low.

2: Spearman's correlation with commitment score.

3: No mean score is given because this item does not have a five-point-scale.

**Significance $p < 0.01$; * Significance $p < 0.05$

Table 3: Effects of commitment

	% of response mentioning this effect
Work	
Better quality	66.2
More client-centeredness	53.1
Higher productivity	40.3
Employees	
Higher willingness to change	49.7
Changes are faster accepted	44.5
Employees learn more	25.2
Organization	
Improved communication	51.4
Less illness	40.3
Employees come up with more good ideas	34.5
Knowledge and skills remain in the organization	33.4
Higher capacity of change	29.3
Higher profitability	15.9
Higher internal mobility	14.5
Other	0.7

Activities to stimulate commitment

The activities that are marked by more than 50% of the respondents are: meeting where employees get information about the organization (61%), stimulation of informal contacts between managers and employees (58%), training and education (53%), and parties for employees (51%). These 'most popular' activities, turn out to have the highest impact on commitment. In Table 4 the results of a t-test is presented for the differences in mean commitment scores when these activities are or are not a part of the companies policy.

Table 4: Mean differences when activities are and are not undertaken.

	Mean commitment score					
Activity	Marked	Not marked	Mean difference	t	df	Significance
Party	4.18	3.87	0.31	4.6	281	< 0.01**
Informal contacts	4.10	3.91	0.19	2.7	281	< 0.01**
Training	4.09	3.95	0.14	2.1	281	0.03*
Informative meeting	4.06	3.97	0.09	1.2	281	0.21

* : Significance $p < 0.05$; ** : ** Significance $p < 0.01$

5. How this research may contribute to new knowledge in HRD

The small sample does make us reluctant for generalizations. Originally set up as a study to test the validity of the commitment -effect model, the low response forced us to use the survey data for a more exploring kind of correlation study. So the contribution to new knowledge in HRD and to new practices is relative. What is necessary is a replication with a larger sample, and a study under employees the cross validate the outcomes of HR managers. But the general conclusion that we find is that commitment leads to positive effects for the company. The most important effects perceived by managers are: higher quality and better client relationships. At the level of the organization the most important effects are a better communication and less illness. At the level of the individual employee the commitment to change and take part very active in change processes, bringing up new ideas. While these effects are in line with the literature, this study did not test the relationship between commitment scores and effects. The effects are average opinion scores.

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Commitment is correlated with colleagues (teamwork) and style of management. Both are part of an informal organizational culture, with a low status difference between employees and managers. In this sense the study could underscore some basic principles of what is meant the "learning organization"(Senge, 1990). Many organizations do undertake actions to develop this kind of culture, more or less intentional. Especially activities as parties and informal sessions and meetings can stimulate commitment.

The implication can be that for companies willing to rise the commitment of the employees a cultural change is necessary, based on core competencies. This is not easy to do, but evidently profitable. A start could be made by a better selection and training of HR managers and setting up an commitment policy. Before doing so a replication study has to prove that correlations can be transformed into predictions.

References

Allen, N.J. & Meyer, J.P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology, 63*, 1-18.

Biessen, P.G.A. (1992). *Oog voor de menselijke factor; achtergrond, constructie en validering van de basisvragenlijst Amsterdam*. Amsterdam: Swets & Zeitlinger.

Boerlijst, J.G., Munnichs, J.A.M, & Heijden, B.I.J.M. van der. (1995). *De oudere werknemer.(The ageing employee)* (HRM Paper Nr. 95-01). Enschede: Vakgroep Human Resource Management.

Breukelen, J.W.M. Van (1996). Organizational commitment in perspectief. *Gedrag en organisatie, 9,* p. 145 - 166.

Caldwell, D.F., Chatman, J.A. & O'Reilly, C.A. (1990). Building organizational commitment: A multifirm study. *Journal of Occupational Psychology, 63*, 245-261.

Gallie, D. & White, M. (1993). *Employee commitment & the Skills Revolution. First findings from the employment in Britain survey*. Londen: Policy Studies Institute.

Hackman, J.R. & Oldham, G.K. (1980). *Work redesign*. Reading: Addison-Wesley.

Korte, A.W. de & Bolweg, J.F. (1994) *De nieuwe werknemer. Een verkenning naar veranderingen in werknemerwensen en de managementconsequenties daarvan.(The new employee).* Assen: Van Gorcum.

Lawler, E.A., Mohrman, S.A. & Ledford, G.E. (1995). *Creating high performance organizations, practices and results of employee involvement and total quality management in fortune 1000 companies*. San Francisco: Jossey Bass.

Morris, M., Lydka, H. & O'Creevy, M.F. (1993). Can commitment be managed? A longitudinal analysis of employee commitment and human resource policies. *Human Resource Management Journal*, 3 (3), p. 21 - 42.

Mowday, R.T., Porter, R.W. & Steers, R.M.,(1982). *Employee-Organization Linkages. The psychology of commitment, absenteeism and turnover* . New York: Academic Press.

Nonaka,I., & Takeuchi, H., (1991). *The knowledge creating company*. Oxford University Press: New York.

Parker, S.K., Mullarkey, S. & Jackson, P.R. (1994). Dimensions of performance effectiveness in high involvement organizations. *Human Resource Management Journal, 4* (3), p. 1-18.

Peeters, M.C.W. & Meijer, S. (1995). Betrokkenheid bij de organisatie, de afdeling en het werk: een zinvol onderscheid? (Commitment in organizations, divisions and the job: a meaningful distinction). *Gedrag en Organisatie, 8,* p. 153 - 164.

Senge, P. (1990). *The Fifth Discipline*. New York: Doubleday.

A Study of Role Conflict, Role Ambiguity and Job Satisfaction in the Georgia Cooperative Extension Service and Implications for Training

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Organizational and personal correlates of role conflict, role ambiguity and job satisfaction were examined for Georgia County Extension Agents (CEA's). Several personal and work characteristics were significant predictors of role stress. Role conflict was a significant predictor in six of the job satisfaction models, while role ambiguity was significant in two models. Males and younger CEA's were more satisfied with several dimensions of job satisfaction than were female and older CEA's.

The nature of the work environment has changed drastically. Today's workers are faced with budget cuts and downsizing, frequent organizational change and new tecnological developments that require new skills. In addition, many workers must use new modes of operation. Networking and working across traditional boundaries are increasingly necessary to tap the broad knowledge base necessary to develop innovative solutions required to solve today's complex problems. Today's workers are faced with continual change.

Roles in changing organizations can be ambiguous because role expectations change frequently (Kahn et al., 1964). Previous research has shown that during periods of change, organizational members may experience a lack of understanding of their new roles (role ambguity) as well as role conflict while roles and responsibilities are renegociated. Difficulties in attempting to satisfy conflicting or incompatible job demands (role conflict) and unclear expectations (role ambiguity) are two causes of occupational stress (Rizzo et al., 1970). Furthermore, both role conflict and role ambiguity have been shown to be associated with decreased job satisfaction (Fisher & Gitelson, 1983; Jackson & Schuler, 1985; Lamble, 1980; Igbaria & Guimaraes, 1993; Zahra, 1986).

A Changing Organization

The Georgia Cooperative Extension Service is a non-formal, community-based educational program responsible for addressing a broad range of individual needs and community issues through educational programming at the county level. The state's rapid population growth, population shifts from rural to urban and suburban areas, economic depression in rural areas and new social problems continually challenge County Extension Agents (CEA's) to work across subject matter and organizational boundaries to develop innovative programs to meet continually evolving needs. Another effect of population growth is that Extension must serve larger populations in growth counties, usually with no increase in staff. In addition, more diverse populations result in a wider variety of expectations among clientele.

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Meanwhile, the Georgia CES also experienced administrative changes and adopted the National Extension Priority Initiatives. Programming for the new initiatives challenged CEA's to address critical issues and work outside their traditional disciplines. Meanwhile budget shortfalls required that some positions be left unfilled for long periods of time making it necessary for remaining county staff to assume additional responsibilities.

In Georgia, the County Extension unit serves as the base of operations for Cooperative Extension Service (CES) educational programs. At the time of the study, each county was staffed with at least one County Extension Agent (CEA), with most having at least two. CEA's are responsible for supervising the work of one or more secretaries and, sometimes, paraprofessionals as well as a large corps of volunteers. The county is charged with the responsibility of developing and implementing educational programs based on local problems, needs, interests and resources.

Although Extension Agents operate somewhat autonomously, they are accountable to the County and District Extension Directors. They must also maintain relationships with and satisfy the expectations of others outside the formal chain of command.

The role requirements of the Extension Agent coincides closely with the organizational roles identified by Kahn et al. (1964) that are likely to cause role conflict, role ambiguity and role stress. They are (a) roles in changing organizations, (b) roles for which there are considerable differences in expectations among various members of the role set, (c) roles that require innovative solutions to non-routine problems, (d) roles that require coordination across departmental or organizational boundaries, (e) roles with responsibility to more than one supervisor and (f) roles that require the supervision of others. Furthermore, according to White (1986), role overload is associated with budgetary shortfalls and the need to accomplish more with less money and fewer staff. In addition, when vacant positions are finally filled, a period of ambiguity and conflict may follow as role expectations are learned and negotiated.

Need for the study

Although the relationship of role conflict and role ambiguity to low job satisfaction is relatively well documented (Khan et al., 1964; Lamble; 1980; Rizzo et al., 1970), it is pointed out by Newton and Keenan (1987) that the personal and job related characteristics that Kahn et al. (1964) identified as predictors of role conflict and role ambiguity have been largely ignored. Consequently, understanding of the causes of role stress is still limited. This study attemptes to fill this void.

In addition, many of the past studies were conducted in industrial settings. Only two studies (Lamble, 1980; Lovell, 1980) were located in which role conflict and role ambiguity were examined in a CES setting. Unlike industrial workers, Extension agents work with a great deal of autonomy. Therefore, the questions were whether the same relationships exist between role conflict, role ambiguity and job satisfaction for Extension Agents as for industrial employees and which personal and organizational factors affect these relationships.

Although the findings of this study are limited to the Georgia Cooperative Extension Service, the results of this study also have implications for CES in other states which are experiencing similar situations. In addition, there are implications for other organizations experiencing downsizing and undergoing changes, as well as for workers whose job characteristics are similiar to those of Extension Agents.

Research Questions

This study was concerned with the relationship of both role conflict and role ambiguity to job satisfaction for professional employees in an informal adult education setting, the Georgia CES.

The effects of other personal and job related variables on role conflict, role ambiguity and job satisfaction were also investigated. The following research questions were posed:

1. What personal and job related characteristics are related to role conflict, role ambiguity and job satisfaction for Georgia Extension Agents?
2. Are role conflict and role ambiguity related to job satisfaction for Georgia Extension Agents?
3. How can staff development be utilized to help Extension Agents effectively deal with role conflict and role ambiguity and related issues?

The effects of twenty-three other selected personal and job related variables on role conflict, role ambiguity and job satisfaction also were investigated.

Methodology

The population for this study consisted of all 461 CEA's (CEA's) employed by the Georgia Cooperative Extension Service at the time of the survey. Since job characteristics are thought to be a major influence on role conflict and role ambiguity (Kahn, et al., 1964) location of work was selected as one of the independent variables. Using the system developed by Bachtel, Mandell and Lee (1988), counties were classified as urban, suburban, rural growth or rural decline. All of the 461 possible subjects were categorized into one of these four categories. Sampling with replacement was used to obtain results from 50 CEA's in each location category for a total of 200 subjects. Replacement subjects were selected at the same time as the original sample.

Data Collection. Data were collected by means of a mailed questionnaire, which had been pilot tested with CEA's in another state. To maintain anonomity while allowing for follow-up on non-respondents, subjects were asked to return a separate postcard to the researcher at the same time as the questionnaire. The response rate was 86.6%. The sample was representative of the population, since the means for gender and position were virtually identical for the population and sample.

Instrument. The questionnaire was developed to gather data on: (1) role conflict and role ambiguity, (2) job satisfaction,(3) programming and (4) in-service training received. Additional items were designed to obtain data on personal and job related characteristics.

Role Conflict and Role Ambiguity. Role conflict and role ambiguity were measured by a 7-point Likert-type scale using a slightly modified version of the scales developed by Rizzo et al. (1970). Two additional items, developed by Lamble (1980), were added to measure specific kinds of role conflict that occur in the CES.

The scales by Rizzo et al.,(1970) were selected because they have been widely used in research on role conflict and role ambiguity (Fisher & Gitelson, 1983; Jackson & Schuler, 1985; Lamble, 1980; Lovell, 1980; Miles, 1976; and Valenzi & Dessler, 1978). The reliability of the role conflict/role ambiguity scales was established by Schuler, et al., (1977) however, both the validity and reliability of these scales have been questioned (Tracy and Johnson, 1980; Shepherd and Fine, 1994).

Job Satisfaction. The revised Job Descriptive Index (Bowling Green State University, 1985) was used to measure job satisfaction. One item was omitted since it was not applicable to the role of CEA.

Operationalization of the Variables. Role conflict, including role overload which can be considered as a special type of role conflict (Kahn, 1964), and role ambiguity were treated as both independent and dependent variables. Role conflict, role overload and role ambiguity were treated as independent variables with job satisfaction and as dependent variables with the various personal, interpersonal, organizational and program characteristics. House and Rizzo (1972) had previously treated role conflict and role ambiguity as both a dependent and an independent variable. The various dimensions of job satisfaction were treated as dependent variables.

Data Analysis. Data were collected on twenty-three independent variables and, although some items are unique to CES, they are representative of job changes and responsibilities that have previously been found to affect employees' attitudes toward role conflict and role ambiguity (Kahn et al., 1964).

To reduce the number of variables under consideration, Varimax rotation factor analysis (Tabachnick & Fidell, 1983) was conducted. Factor patterns containing as few as three items were retained, if they met the established 0.4 theta reliability criterion. Even though the role conflict and role ambiguity scales had been widely used, Rizzo (personal communication, August, 1988) recommended that the items be factor analyzed to develop sub-scales specific to the particular occupation.

Procedures used to test the hypotheses included factor analysis, multiple regression and the chi-square test of independence. The reliability of the scales that emerged was tested using theta reliability, a special case of Cronbach's alpha (Armor, 1974).

Results

There are both similarities and differences in the factor patterns for the role conflict/role ambiguity items that emerged in this study as compared with the patterns reported by Rizzo et al. (1970) and Lamble (1980). A major difference is that three significant patterns emerged rather than two and each pattern contained fewer items.

The pattern labeled "role ambiguity" contained only six items. All six items, however, were also retained in the role ambiguity factor patterns reported by Rizzo et al. (1970) or Lamble (1980) or both. The pattern labeled "role conflict" contained seven items. Of the seven items, two were unique to CEA's in Georgia and were not retained in the role conflict pattern reported by either Rizzo et al. (1970) or Lamble (1980). The factor pattern labeled "role overload" was unique to this study. The three items in this pattern loaded on both role conflict and role ambiguity or neither in the comparative studies.

An indication of the level of role stress for CEA's in Georgia was provided by the mean scores for role conflict, role ambiguity and role overload. On a seven-point scale from never (1) to always (7), except for positively worded items where the coding was reversed, the mean score for the role conflict items was 3.68. Similar, although not identical items, administered to managers and engineers using a seven-point scale with seven as high (Rizzo et al., 1970), yielded mean scores of 4.19 and 3.86 respectively. CEA's mean score for the role ambiguity items was 3.19, while the means for managers and engineers (Rizzo et al., 1970) were 3.79 and 4.03 respectively.

From this limited comparison, it appears that role conflict and role ambiguity are slightly lower for CEA's than for the managers and engineers studied by Rizzo et al. (1970). It is, unfortunately, impossible to generalize from this limited comparison as few details were available about the managers' and engineers' work situation. However, CEA's have considerable autonomy and the lower scores may indicate that they are dealing with their situation more effectively than the managers and engineers studied by Rizzo et al. (1970).

The distributions of the subject's total scores for the role conflict, role ambiguity and role overload scales provide additional insight into the occurrence of role stress in the Georgia CES. Therefore, although the mean item scores do not appear to be unusually high for the total sample, the distributions of the total scores indicate that role conflict, ambiguity and overload are high for a number of individuals within the sample. Furthermore, role conflict appears to be widespread.

Two studies were located (Lamble, 1980; Lovell, 1980) that examined role conflict and role ambiguity among Extension Agents but, unfortunately, the use of different scales precludes meaningful comparisons. The mean score on the role overload scale for Georgia CEA's was 4.37 on a 7-point scale with seven as high.

Job Satisfaction. The slightly modified revised Job Descriptive Index (Bowling Green State University, 1985) was scored prior to the factor analysis to obtain an indication of the job satisfaction of the study population relative to the norms which have been established for the instrument. A comparison with the norms shows that CEA's satisfaction with work, supervision and co-workers appears to be about average. Female CEA's, however, are slightly less satisfied with co-workers than either male CEA's or females in the normative study. Both male and female CEA's are much less satisfied with pay and promotions than would be expected. Furthermore, male CEA's are considerably less satisfied with pay than female agents. Female CEA's however, are considerably less satisfied with promotions than male agents.

Role conflict emerged as a significant predictor in six of the eight job satisfaction models while role ambiguity emerged as a significant predictor in two models. Gender, years of Extension experience, recent changes in program responsibilities, number of professionals interacted with on a regular basis, number of support staff worked with on a regular basis, responsibility for supervision and training received on youth issues also emerged as significant predictors of job satisfaction. Male and younger CEA's were more satisfied with several dimensions of job satisfaction than were female and older CEA's.

Specifically, less experieenced CEA's were more satisfied with three dimensions of job satisfaction than were older CEA's: satisfaction with interaction among co-workerrs, satisfaction with supervisor's ability and satisfaction with promotions.

Personal and Job Characteristic. Several independent variables emerged as statistically significant predictors of role stress (role conflict and role ambiguity) and job satisfaction. These included changes in county work location, educational level, number of support staff worked with on a regular basis, responsibility for supervision and training received on youth issues. Recent changes in work location, the number of support staff and responsibility for supervision are consistent with the job characteristics Kahn, et al. (1964) identified as likely to cause role conflict, role ambiguity and role stress.

Except for responsibility for supervision, which Newton and Keenan (1987) also identified as a strong contributor to role overload for engineers, there been little research into work characteristics and what little has been done is not comparable as different characteristics were identified. In this study, the CEA's who supervised other employees also scored higher on the role overload scale than CEA's who did not supervise other employees.

Interestingly, in this study the CEA's scores on role overload increased as the number of support staff decreased. This finding does not support the theory of Kahn et al. (1964) that role stress is related to the number of individuals in the role set. Since a larger support staff usually has program assistants who assume responsibility in clearly defined areas, it is likely that whatever additional role stress results from increased numbers of people is offset by the fact that they share the work load.

The finding that CEA's with master's degrees scored higher on the role ambiguity scale than employees with bachelor's degrees would seem to contradict the beneficial effects of education. It should be noted, however, that in this study there was no attempt to correlate role conflict, role ambiguity or job satisfaction with job performance. A possible explanation is that during the course of their studies CEA's develop a greater awareness of issues and program development models which results in ambiguity as CEA's attempt to balance the realities of time demands and expectations of traditional clientele with their own new ideas.

This finding is consistent with those of Glisson and Durick (1988) who also found that educational level and role ambiguity were positively related for human service organization workers. Human service workers, like Extension Agents, face many demands with few resources and tend to work in relatively small groups. A meta-analysis by Fisher and Gitelson (1983) also revealed a consistent and positive relationship between education and role ambiguity, although the relationship was weak. However in Newton and Keenan's (1987) study of engineers in the UK, education and role ambiguity were not related.

The finding that CEA's who had received less training on youth issues scored higher on the role ambiguity scale than employees who had received more training on youth issues provides important support for staff development programs prior to the implementation of new program initiatives. Many of the CEA's who are expected to address such issues as drug and alcohol abuse and teen pregnancy were professionally trained is in agriculture. In-service training on new initiatives can provide competency in these new areas.

Recommendations

Since role conflict and role ambiguity were identified as useful predictors of job satisfaction for CEA's, there is a need to test more rigorously the relationships which were uncovered in this study. Multiple tests should also be conducted to continually monitor the impact of further organizational change and the impacts of staff development programs.

The lower levels of satisfaction among women raises the question as to whether further research might reveal different predictors of role stress and job satisfaction for women than for the total sample. In addition, more specific role and organizational characteristics that are associated with role conflict and role ambiguity should be identified so the models can be further developed.

Implications for Strategic Planning and Staff Development. According to Goode (1960), "one of the most common complaints of high level professionals and executives is that they have no time" (p. 487). CEA's, like high level professionals, have a great deal of autonomy. The freedom to make one's own choices has advantages, but there also are disadvantages. People in autonomous roles often experience more role stress because of the opportunities and demands.

Since role conflict and role ambiguity were important predictors of job satisfaction, it is important to help CEA's manage and use them constructively. Although high levels of role conflict and ambiguity can be detrimental to both the individual and the organization (Wolfe & Snoek, 1962), role conflict and ambiguity can be either constructive or destructive (McGrath, 1976). Ambiguity provides autonomy as well as a mechanism for providing flexibility to adapt to rapidly changing situations (Weick, 1977) while conflict can provide the stimulus for innovative approaches (Thomas, 1976). Nevertheless, in this era of declining resources and downsizing, CES in all states must recognize that the organization cannot continue to be all things to all people and engage in system wide priority setting and strategic planning. Since priority setting will require that some programs be eliminated, it is important that CEA's receive training to facilitate a process that involes all segments of the clientele base in the decision. Just as businesses increasingly depend on employee expertise to shape the business strategy (Torraco & Swanson, 1995), Extension Agents should depend on clientele, supporters and community leaders to establish strategic directions. In depth training on issues identification, priority setting, planning and group process techniques should be system wide.

The relationship of role conflict and role ambiguity to satisfaction with co-workers and supervision also indicates a need for training in interpersonal communications and conflict management. Ideally, this training should include the entire county team, including support staff, in the same session,.

The decrease in job satisfaction with increasing tenure and low satisfaction of females on certain dimensions of job satisfaction is a particular concern. Since opportunities for promotions are limited, and females may not have the mobility to take advantage of the few that become available, other incentive programs might be utilized. One possibility is an officially recognized mentoring program for new employees which provides practical training to new employees while recognizing the competencies of experienced exployees who are selected as mentors.

This study also revealed that a large number of CEA's had responsibility for supervising other employees or volunteers. Because supervision was a significant predictor of role stress, all CEA's who supervise others should participate in supervisory training sessions.

Summary

Although the relationship of role conflict and role ambiguity to low job satisfaction was relatively well documented (Khan et al. 1964; Lamble, 1980; Rizzo et al., 1970), Newton and Keenan (1987) pointed out that the personal and job related characteristics that Kahn et al. (1964) identified as predictors of role conflict and role ambiguity have been largely ignored. Consequently, understanding of the causes of role stress had been limited.

In addition, many of the past studies were conducted in industrial settings. Since Extension Agents typically function in small work group with a great deal of autonomy the questions were whether the same relationships exist between role conflict, role ambiguity and job satisfaction for CEA's as for industrial employees. This study sheds light on the similiarities and differences and identifies implications for staff development programs.

In this study both role conflict and role ambiguity were found to be significant predictors of job satisfaction. Job satisfaction, however, tended to be greater for CEA's with fewer years of Extension experience.

This study also attempted to fill a void by utilizing a large number (23) of personal and job related characteristics as independent variables in a study of employees in a changing organization. Factor analysis yielded several statistically significant factor patterns that were further analyzed by multiple regression to illuminate the relationship of personal and job related characteristics to role conflict and role ambiguity. Significant predictors of higher levels of role stress (role conflict and role ambiguity) and job satisfaction included recent changes in county work location, higher educational level, fewer support staff worked with on a regular basis, responsibility for supervision and less training received on youth issues.

References

Armor, D. J. (1974). Theta reliability and factor scaling. In H. L. Costner (Ed.), *Sociological methodology* (pp. 17-50). San Francisco: Jossey-Bass.

Bachtel, D. C., Mandel, M., & Lee, E. S. (1988). Georgia's changing social, economic and demographic environment: A historical perspective. *Issues Facing Georgia,* 2(8). Athens, Georgia: The University of Georgia, Cooperative Extension Service.

Bowling Green State University. (1985). The job descriptive index (rev. ed.). Bowling Green, OH.

Fisher, C. D. & Gitelson, R. (1983). A meta-analysis of the correlates of role conflict and ambiguity. *Journal of Applied Psychology*, 68(2), 320-333.

Glisson, C. & Durick, M. (1988) Predictors of job satisfaction and organizational commitment in human service organizations. *Administrative Quarterly*, 33, 61-81.

Goode, W. J. (1960). A theory of role strain. *American Sociological Review*, 25, 483-496.

House, R. J. & Rizzo, J. R. (1972). Role conflict and ambiguity as critical variables in a model of organizational behavior. *Organizational Behavior and Human Performance*, 7, 467-505.

House, R. J., Schuler, R. S. & Levanoni, E. (1983). Role conflict and ambiguity scales: reality or artifacts? *Journal of Applied Psychology*, 68(2), 334-337.

Igbaria, M. & Guimaraes, T. (1993). Antecedents and consequences of job satisfaction among information center employees. *Journal of Management Information Systems*, 9 (4), 145-155.

Jackson, S. E. & Schuler, R. S. (1985). A meta-analysis and conceptual critique of research on role ambiguity and role conflict in work settings. *Organizational Behavior and Human Decision Processes*, 36, 16-78.

Kahn, R. L., Wolfe, D. M., Quinn, R. P., Snoek, J. D. & Rosenthal, R. A. (1964). *Organizational stress: Studies in role conflict and ambiguity.* New York: John Wiley and Sons.

Lamble, G. W. (1980). Role conflict and ambiguity of agricultural extension agents. *Dissertation Abstracts International*, 41, 1346A. (University Microfilms No. 8023044)

Lovell, G. J. N. (1980). Role conflict and role ambiguity and perception of the management system in the Alabama Cooperative Extension Service. *Dissertation Abstracts International*, 40, 3698A. (University Microfilms No. 8002300)

McGrath, J. E. (1976). Stress and behavior in organizations. In Dunnette, M. D. (Ed.), *Handbook of Industrial and Organizational Psychology* (pp. 1351-1395). Chicago: Rand McNally College Publishing.

Miles, R. H. (1976). A comparison of the relative impacts of role perceptions of ambiguity and conflict by role. *Academy of Management Journal*, 19(1), 25-35

Newton, R. J. & Keenan, A. (1987). Role stress reexamined: An investigation of role stress predictors. *Organizational Behavior and Human Decision Process*, 40, 346-368.

Rizzo, J. R., House, R. J. & Lirtzman, S. L. (1970). Role conflict and ambiguity in complex organizations. *Administrative Science Quarterly*, 15, 150-163.

Schuler, R. S., Aldag, R. J. & Brief, A. P. (1977). Role conflict and ambiguity: A scale analysis. *Organizational Behavior and Human Performance*, 20, 111-128.

Shepherd, C. D. & Fine, L. M. (1994). Scaling and measurement: Role conflict and role ambiguity reconsidered. *The Journal of Personal Selling & Sales Management*, 14(2), 57-68.

Tabachnick, B. G. & Fidell, L. S. (1983). *Using multivariate statistics*. New York: Harper & Row.

Thomas, K. (1976). Conflict and conflict management. In M. D. Dunnette (Ed.), *Handbook of Industrial and Organizational Psychology* (pp. 889-935). Chicago: Rand McNally College Publishing.

Torraco, R. J. & Swanson, R. A. (1995). The strategic roles of human resource development. *Human Resource Planning*, 18(4), 11-21.

Tracy, L. & Johnson, T. W. (1980). What do the role conflict and role ambiguity scales measure? *Journal of Applied Psychology*, 66(4), 464-469.

Valenzi, E. & Dessler, G. (1978). Relationships of leader behavior, subordinate role ambiguity and subordinate job satisfaction. *Academy of Management Journal*, 21(4), 671-678.

VanSell, M., Brief, A. P. & Schuler, R. S. (1981). Role conflict and role ambiguity: Integration of the literature and directions for future research. *Human Relations*, 34(1), 43-71.

Weick, K. E. (1977). Organizational design: Organizations as self designing systems. *Organizational Dynamics*, 3, 31-46.

White, W. W. (1986). *Incest in the organization: The ecology of burnout in closed systems*. Bloomington, IL: The Lighthouse Training Institute.

Wolfe, D. M. & Snoek, J. D. (1962) A study of tensions and adjustment under role conflict. *Journal of Social Issues*, 18, 102-121.

Zahra, S. A. (1986). A comparative study of role ambiguity and conflict on employee attitudes and performance. *Akron Business and Economic Review*, 16(1), 37-42.

Professional Learning on the Job of Dutch Secondary Teachers: Exploring Opportunities for Informal Learning

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In this study opportunities for informal learning of Secondary school teachers are adressed. Professionals are expected to learn by executing specific activities. As it was assumed that professional learning is related to individual and job variables, a questionnaire was constructed to measure activities as well as motivation, professional attitudes, job stress, and job characteristics. Analysis will aim at answering two questions: 1) To what extent do teachers perform professional activities?, and 2) Which variables are related to this performance?

Professionals generally need to keep up their skills after they have graduated in order to develop their competence and to improve the quality of the service provided to clients (Houle, 1980; Mintzberg, 1979). Traditionally, professionals are expected to improve and update their skills in very specific ways: by reading journals and literature, participating in courses and attending conferences (Houle, 1980; Mintzberg, 1979; Noe & Wilk, 1993). Thus, new scientific developments arising outside the professional practice are the main source for improvement of that practice. Therefore, it is assumed that professional development is largely based on learning by transmission of knowledge.

Recently, this model of professional development has been discussed for teachers (Darling-Hammond & McLaughlin, 1995; Lieberman, 1995; Little, 1993). Although transmission of knowledge is of importance for professional learning, it is viewed as only one aspect of professional development. As professional development also refers to changes in knowledge, skills, attitudes, and behaviour, professionals need to create their own knowledge and change their behaviour in order to implement new developments and to improve their practice (Hoyle & John, 1995; Osterman & Kottkamp, 1993). In this new model of knowledge creation, other ways of learning are stressed. Great emphasis is given to learning on the job and to a variety of activities which are hypothesized to stimulate reflection and interaction.

So, professional learning on the job is conceived of as executing activities in the course of daily work, which may lead to improvement of practice. These learning activities may be subdivided into four categories (Calderhead & Gates, 1993; Eraut, 1993; 1995; Fullan, Bennett & Rollheiser-Bennett, 1990; Fullan & Hargreaves, 1992; Hoyle & John, 1995; Imants, Tillema & De Brabander, 1993; Southworth, 1994):

- keeping up with new developments in the professional field
- putting new developments and insights into practice
- reflecting on one's own performance
- cooperating in policy and practical matters.

With this shifting attention to learning on the job the question arises if teachers' work provides sufficient opportunities for such kinds of learning. As most of teachers' work takes place in the classroom and is executed independently, there may be little possibilities for reflection, interaction, and cooperation with colleagues. In the literature about professional development specific workplace conditions and school features are stressed like mutual goals, collegiality, participation, support, and autonomy (Clement & Staessens, 1993; Firestone & Pennell, 1993; Fullan, 1992; Hargreaves, 1994; Leithwood, 1992; Little, 1990; Rosenholtz, Bassler & Hoover-Dempsey, 1986; Rosenholtz, 1989; Rowan, 1995). However, the relationship of these conditions with learning is assumed and it remains unclear in what way these conditions may contribute to learning.

Theoretical Framework

In this study, a social psychological model to explain job stress was taken as a starting point for a theoretical framework for teacher learning in the workplace. The Karasek model proposes

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the discretion permitted to the worker in how to meet these demands: job control (De Jonge. that psychological strain results from the joint effects of the demands of a work situation and Janssen & Van Breukelen, 1996; Karasek & Theorell, 1990; Söderfeldt, Söderfeldt, Muntaner, C'Campo, Warg & Ohlson, 1996). The major prediction of the model is that strain will occur when job demands are high and control is low, whereas the second prediction is that motivation, learning, and growth will occur in situations where both job demands and control are high (De Jonge et al, 1996).

This model has been extensively tested, but not for the learning hypothesis. In this study the concepts of job demands and job control will be used to gain more insight into the effects of these job characteristics on learning. However, as job control has different components, the study will include two different operationalizations of this concept. The first is 'job variety', i.e. the degree to which the job involves learning new things, novelty, absence of routinization, and development of the workers' special abilities. The second component is 'job autonomy', i.e. the freedom to make decisions about one's own job and to influence the work group and company policy (Söderfeldt et al, 1996). Of these two components 'job variety' comes closest to the meaning of control in the Karasek model. Next to these three variables the study includes job stress variables in order to test the predicted main effects of the model.

The study will be extended with the variables 'learning motivation', 'professional attitudes', and 'social support'. Learning motivation was measured because of the importance attached to this variable in adult learning and self-directed learning theories (Candy, 1991; Farr & Middlebrooks, 1990; Merriam & Caffarella, 1991). Because of the nature of professional work and the individual responsibility professionals have for their own development, teachers have to agree with the need of improving practice and developing theirselves. So, professional attitudes are considered to be of major influence. (Fullan,1991; Houle, 1990; Imants, Tillema & De Brabander, 1993; Rowan, 1995; Rowan, Raudenbush & Kang, 1993; Smylie, 1992; Willis & Dubin, 1990). The most common criticism of the Karasek model is that it is too simple and that it needs to be extended. So, it is stated that control is not the only variable to cope with job demands and that social support may be extremely important in this respect. Social support may also be regarded as indicative of a favorable schoolculture or collaborative climate which many authors regard as a significant factor in professional development (Hargreaves, 1994; Leithwood, 1992; Louis & Smith, 1990; Rosenholtz, 1989; Southworth, 1994).

Research Questions

The present study was carried out to gain more insight in the occurence of learning on the job, and in the variables that are related to professional learning. So, two research questions were formulated:

1) To what extent do teachers perform professional activities?
2) Which variables are related to this performance?

Methodology

Procedure. In six different areas of The Netherlands, all schools providing at least two types of Secondary education were asked to participate in the study. From these 63 schools, 15 were willing to participate. Data collection took place in the Spring of 1997 by means of a survey. A questionnaire was administered to all 967 teachers in these 15 schools.

Respondents. Finally, 558 teachers returned the questionnaire. So, the response rate was 58%, which is fairly high for this kind of organizational research. The mean age of the sample is 45,8 years (SD=9,0); 68% are male (n=372) and 32% female (n=174). Their mean working experience is 20 years (SD=9,8).

Measures

Professional Activities were measured by 21 items. These items were derived from interviews (Kwakman, 1997). Teachers were asked to state how often they performed each activity on a four-point scale (1=hardly ever, 2=sometimes 3=fairly often, 4=often).

Learning Motivation was measured by 2 items in connection to each activity (2 x 21 items in sum). Teachers were asked to state their opinions about the meaningfullness and feasibility of each of the 21 activities.

Professional Attitudes were measured by means of 8 items reflecting specific ways in which teachers may feel obliged to improve their professional practice. They were asked to indicate to what extent they agreed with each of the statements on a four-point scale (1=disagree, 2=slightly disagree, 3=slightly agree, 4 = agree).

Personal Accomplishment (as one component of job stress) was measured by 4 items, referring to one's feeling of competence and succesful achievement. They were derived from the Dutch Version of the Maslach Burnout Inventory for Teachers (Schaufeli, Daamen & Van Mierlo, 1994). They are scored on a seven-point scale: 1=never, 2=hardly ever, 3=seldom, 4=sometimes, 5=often, 6=nearly always, 7=always.

Emotional Exhaustion is another component of job stress and was measured by 3 seven-point items (ranging from 'never' to 'always') asking teachers to what extent they feel emotionally overextended. The items were derived from the Dutch Version of the Maslach Burnout Inventory (De Jonge, Janssen & Van Breukelen, 1996; Schaufeli & Van Dierendonk, 1993).

Job Demands were measured by means of 7 four-point items (1=hardly ever, 2=sometimes, 3=often, 4=nearly always), all referring to quantitative demanding aspects such as pace of work and work load. They were all derived from a 11-item scale developed by the Dutch Institute of Working Conditions (VBBA; Van Veldhoven & Meijman, 1994).

Job Variety was measured by 9 four-point items, derived from two different scales developed by the Dutch Institute of Working Conditions (VBBA; Van Veldhoven & Meijman, 1994). Five items were originated from the scale 'job variety' whereas four items were originated from the scale 'learning opportunities', asking how much diversity the work offers and how many opportunities are provided to learn and develop.

Job Autonomy was also measured by items derived from scales developed by the Dutch Institute of Working Conditions. Sixteen four-point items were derived from the scales 'autonomy' and 'participation'. They measure the opportunity to determine and have influence over decisions, working conditions, and task characteristics (response scale ranging from 1 'hardly ever' to 4 'always').

Social Support of Colleagues was measured by 4 items of work-related support from colleagues. These four-point items (1=hardly ever, 2=sometimes, 3=often, 4=nearly always) were derived from a Dutch questionnaire on organizational stress (VOS-D; Bergers, Marcelissen & De Wolff, 1986).

Social Support of Management was measured by 5 items of work-related support from the school management (four-point scale). These items were developed by the Dutch Insitute of Working Conditions.

Support for Development was measured by 5 items which were developed for this survey. Teachers were asked to state on a four-point scale to what extent opportunities for training and development are offered.

Analysis. Analysis was mainly directed at revealing relationships between professional learning and different individual and job variables. Firstly, scales will be constructed by means of factorial analyses. Descriptive statistics and correlations will be given. Next, regression analysis will be performed to reveal relationships between different variables and learning.

Results

Professional Activities. In order to answer the first research question a factor analysis was executed (Principal Component Analysis). This analysis yielded four different factors; 3 items had to be removed. Eigenvalues of the factors are 4.37, 1,68, 1.51, and 1,30; this means that 46% of the variance is explained by these 4 factors. Table 1 shows the factor loadings of the different items.

The first factor consists of 5 activities which all refer to cooperation with other people within the school organization. They demand a fairly high degree of involvement in the school as an organization. So, this factor was called 'active cooperation'. The reliability of the scale is .74 (Cronbach's alpha).

The second factor includes 7 items. Six of them have to do with keeping up with new developments or insights and putting them into practice; one refers to reflection. All activities may be performed individually and they are all directed towards teaching in the classroom. Thus, the label for this factor is 'individual teaching improvement'. The reliability of the scale is .65.

The third factor includes 2 items which fall into the category of reflection. As it was assumed that individual as well as collective activities may stimulate reflection, these two items refer to reflection by 'sharing experiences' with colleagues. This factor was labeled likewise. The reliability for this scale is .74.

Table 1
Factor loadings of items in a 4-factor Principal Component Analysis with Varimax-rotation

	Factor 1	Factor 2	Factor 3	Factor 4
Give opinion to school management	**.79**	.01	-.01	.01
Discuss about educational improvement	**.72**	.15	.04	-.03
Join a committee at the school	**.70**	.07	-.15	.16
Participate in pupil counseling policy	**.61**	.22	.17	.14
Support colleagues in teaching problems	**.53**	.13	.20	.13
Study subject matter literature	.01	**.62**	-.16	.34
Read professional journals	.18	**.59**	.09	.18
Study teaching manuals	.22	**.59**	-.19	.19
Experiment with new teaching methods	.16	**.56**	.31	-.26
Teach students study skills	.27	**.49**	.04	.09
Adapt way of teaching to pupils' needs	-.06	**.45**	.10	.10
Ask pupils feedback	.22	**.45**	.32	-.31
Discuss way of teaching with colleagues	.03	.02	**.83**	.12
Share teaching problems with colleagues	.09	.10	**.78**	.29
Construct teaching materials	.16	.03	.07	**.70**
Prepare lessons with colleagues	-.03	.26	.10	**.54**
Use colleagues' materials in own lessons	.33	.07	.18	**.51**
Make agreements about the way of teaching	.07	.28	.14	**.39**

The fourth factor comprises of 4 items deriving from two different categories of activities. However, these activities have in common that they all refer to a different aspect of preparing lessons. Thus, the factor was labeled 'didactical preparation'. The reliability for this scale is a little low: .54; the non-homogeneous items of this scale may account for this. As preparing lessons is a specific and significant part of teachers' work, this scale was not removed.

Table 2 shows the mean scale scores and standard deviations of the four factors. The mean scale scores reveal that sharing experiences is most frequently executed whereas didactical preparation is least frequently performed.

Table 2
Mean scale scores and standard deviations of factors

	Mean scale score	Standard deviation
Active cooperation	2.22	.62
Individual teaching improvement	2.43	.46
Sharing experiences	2.50	.67
Didactical preparation	2.18	.52

Related Variables. For an answer to the second research question scales had to be constructed first. For motivation, four different scales were constucted. For each factor, a motivational scale was constructed by calculating the mean score of all statements about meaningfullness and feasibility concerning the activities the factor comprises.

By means of factor analytical procedures on the remaining items, the original scales were reproduced although some items had to be removed. Table 3 shows the descriptive statistics of all scales, whereas Table 4 shows significant correlations between learning, stress, and the independent variables. Inspection of these correlations reveales that there are many significant correlations although most of them are weak or moderate (below .40). Only seven correlations are .40 or above, which may be interpreted as (moderately) strong. So, it may be concluded that individual teaching improvement is positively related to professional attitudes, whereas personal accomplishment is positively related to job variety. Other strong relationships only exist between motivation and different types of professional learning, and between professional attitudes and individual teaching improvement.

Table 3
Descriptive statistics of individual and job variables

	Mean scale score	Standard deviation	Cronbach's Alpha	Number of items
Motivation for cooperation	2.95	.49	.78	10
Motivation for improvement	3.06	.75	.75	14
Motivation for sharing	3.30	.82	.82	4
Motivation for preparation	2.87	.70	.70	8
Professional attitudes	3.11	.52	.75	6
Personal accomplishment	4.81	.68	.72	4
Emotional exhaustion	3.67	1.09	.82	3
Job demands	2.41	.57	.87	7
Job variety	2.66	.52	.86	7
Job autonomy	2.46	.48	.86	13
Collegial support	3.21	.56	.79	4
Managerial support	2.95	.70	.85	5
Support for development	2.56	.54	.66	5

Table 4
Significant correlations of variables (p≤.05, two-tailed)

	Active cooperation	Ind. Improvement	Share experiences	Did. preparation	Pers. Accomplishment	Emot. Exhaustion
Mot. for cooperation	*.58*	.23	.12	.18	.29	-.19
Mot. for improvement	.25	*.64*	.14	.22	.27	-.19
Mot. for sharing	.19	.15	*.54*	.22	.09	-.15
Mot. for preparation	.18	.20	.15	*.64*	.15	-.14
Professional attitudes	.28	*.40*	.23	.18	.22	-.13
Personal accomplishment	.28	.28		.10		-.34
Emotional exhaustion		-.14				
Job demands	.14			-.09	-.13	*.56*
Job variety	.27	.27	.16	.14	*.40*	-.33
Job autonomy	.22	.11	.09	.09	.35	-.29
Collegial support	.10		.17	.17		-.25
Managerial support	.13					-.24
Support for development	.25	.20	.09	.17	.17	

In order to test the hypotheses of the Karasek model, a regression analysis was performed, with learning and emotional exhaustion as dependent variables. In this analysis, age and experience were also included as well as three dummy-coded variables: gender, subject matter, and extra curricular tasks. Beta-weights and explained variances are shown in Table 5.

To start with emotional exhaustion: in accordance with the propositions of the Karasek model, teachers who suffer from emotional exhaustion report higher job demands, whereas their feelings of personal accomplishment and perceptions of job variety appear to be slightly more negative. Teaching arts seem to contribute to exhaustion to a small extent.

Considering the first type of professional learning 'active cooperation', the propositions of Karasek are partial confirmed. Although job demands and job variety both contribute to this type of learning, motivation and executing extra curricular tasks contribute even more. There is also a small effect of experience indicating that teachers with more experience do cooperate to a larger extent.

Individual teaching improvement relates most strongly to motivation, whereas it is slightly negatively related to motivation for sharing experiences and to experiencing managerial support. Professional attitudes and personal accomplishment contribute slightly positive to this type of professional learning.

Sharing experiences is negatively related to motivation for improvement but strongly positive to motivation for sharing, and slightly positive to professional attitudes.

Didactical preparation is strongly related to motivation and weakly related to job demands. Age and subject matter go together with more sharing; indicating that teachers who teach arts or are older execute activities concerning didactical preparation more frequently.

Table 5
Significant beta-weights of variables in a multiple regression analysis (method = Stepwise, $p \leq .05$ and Δ R-squared >.01)

	Active cooperation	Ind. improvement	Share experiences	Did. preparation	Emot. Exhaustion
Mot. for cooperation	.50				
Mot. for improvement		.62	-.16		
Mot. for sharing		-.17	.57		
Mot. for preparation				.65	
Professional attitudes		.15	.17		
Personal accomplishment		.14			-.24
Job demands	.18			.12	.51
Job variety	.17				-.16
Job autonomy					
Collegial support					
Managerial support		-.12			
Support for development					
Age				.11	
Teaching experience	.14				
Gender					
Subject matter				.14	.11
Extra curricular tasks	.26				
Explained variance	.50	.47	.33	.46	.42

Conclusions

The professional activities teachers perform most frequently are sharing experiences and activities to keep up with new developments and to apply these into practice. These results confirm that teachers' professional learning takes place in traditional ways rather than in cooperative ways. Striking is that one of teachers' core activities, preparing lessons, is least frequently performed. This may partly be explained by standardization of teachers work as lesson materials are prescribed. However, standardization does not explain why teachers hardly prepare lessons together or make agreements about the way of teaching.

With regard to the propositions of the Karasek model, the prediction that high demands and low control leads to job stress is confirmed. In addition, it may be concluded that job demands positively relates to emotional exhaustion whereas job variety positively relates to personal accomplishment. A combination of high demands and low variety will lead to high emotional exhaustion and low personal accomplishment which is indicative for job stress.

The prediction that learning will occur in situations where both demands and control are high is hardly supported by the findings. Nevertheless, all variables in this study do relate to some extent to performing activities, although not every variable is of the same significance for every type of learning. Motivation appears to be the most significant factor: all types of motivation show very strong correlations with learning, whereas motivation is also the greatest predictor of executing professional activities. A possible explanation may be that the variables in this study are not related in a rather linear way. Therefore, univariate analysis of variance took place: teachers were divided into two groups according to their scores on every type of activity: scores below one standard deviation were coded as 'low', whereas scores above one standard deviation were coded as 'high'. Means between these groups on all variables in this study are shown in Table 6. Thus, it becomes clear that teachers with low scores on activities do have lower scores on some other variables whereas teachers with high scores on activities have the highest scores. However, for every variable, the magnitude of the differences varies. Although some differences are small, they indicate that individual and job variables are related to professional activities in a complex way.

Table 6
Significant differences between groups with low and high scores on types of activities (p≤.05)

	Active cooperation		Individual improvement		Share experiences		Didactical preparation	
	low n=103	high n=68	low n=70	high n=80	low n=43	high n=54	low n=78	high n=104
Prof. attitudes	2.94	3.37	2.80	3.35	2.87	3.33	2.96	3.24
Pers. accomplishment	4.60	5.15	4.52	5.13			4.67	4.92
Emot. exhaustion								
Job demands	2.28	2.55						
Job variety	2.59	3.01	2.38	2.85	2.57	2.84	2.52	2.77
Job autonomy	2.37	2.70	2.32	2.50				
Collegial support	3.10	3.33			3.04	3.35	3.05	3.34
Managerial support	2.85	3.18					2.74	2.96
Sup. for development	2.37	2.81	2.46	2.78	2.51	2.73	2.44	2.79

References

Bergers, G.P.A., Marcelissen, F.H.G. & Wolff, CH. J. de (1986). VOS-D. Vragenlijst organisatiestress-D: handleiding. [VOS-D. Work stress questionnaire]. Nijmegen: University of Nijmegen.

Calderhead, J. & Gates, P. (1993). Conceptualizing reflection in teacher development. London: Falmer Press.

Candy, P.C. (1991). Self-direction for lifelong learning: A comprehensive guide to theory and practice. San Francisco: Jossey-Bass.

Clement, M. & Staessens, K. (1993). The professional development of primary school teachers and the tension between autonomy and collegiality. In: F.K. Kievit & R. Vandenberghe (red.), School culture, school improvement and teacher development. Leiden: DSWO.

Darling-Hammond, L. & McLaughlin, M.W. (1995). Policies that support professional development in an era of reform. Phi Delta Kappa, 76, 597-604.

Eraut, M. (1993). Teacher accountability: Why is it central in teacher professional development? In: L. Kremer-Hayon, H.C. Vonk & R. Fessler (eds.), Teacher professional development: A multiple perspective approach. Amsterdam: Swets & Zeitlinger.

Farr , J.L. & Middlebrooks, C.L. (1990). Enhancing motivation to participate in professional development. In: S.L. Willis & S.S. Dubin (eds.), Maintaining professional competence. Approaches to career enhancement, vitality and succes throughout a work life. San Francisco: Jossey-Bass.

Firestone, W.A. & Pennell, J.R. (1993) Teacher commitment, working conditions, and differential incentive policies. Review of Educational Research, 63, 489-525.

Fullan, M.G. (1991). The new meaning of educational change. New York: Teachers College Press.

Fullan, M.G. (1992). Succesful schoolimprovement: The implementation perspective and beyond. Buckingham: Open University Press.

Fullan, M.G., Bennett, B. & Rolheiser-Bennett, C. (1990). Linking classroom and school improvement. Educational Leadership, 47 (8), 13-19.

Fullan, M. & Hargreaves, A. (eds.) (1992). Teacher development and educational change. Londen: Falmer.

Hargreaves, D. (1994). The new professionalism: The synthesis of professional and institutional development. Teaching & Teacher Education, 10, 423-438.

Hoyle, E. & John, P.D. (1995). Professional knowledge and professional practice. Londen: Cassell.

Houle, C.O. (1980). Continuing learning in the professions. San Francisco: Jossey-Bass.

Imants, J., Tillema, H.H. & Brabander, C.J. de (1993). A dynamic view of teacher learning and school improvement. In: F.K. Kievit & R. Vandenberghe (red.), School culture, school improvement and teacher development. Leiden: DSWO.

Jonge, J. de, Janssen, P.M. & Breukelen, G.J.P. van (1996). Testing the Demand-Control-Support Model among health-care professionals: a structural equation model. Work & Stress, 10, 209-224.

Karasek, R.A. & Theorell, T. (1990). Healthy work: Stress, productivity and the reconstruction of working life. New York: Basic Books.

Kwakman, C.H.E. (March, 1997). Professional learning on the job: A qualitative study for one profession. Paper presented at the annual conference of the Academy of Human Resource Development, Atlanta, Georgia, USA.

Leithwood, K.A. (1992). The principal's role in teacher development. In: In M. Fullan & A. Hargreaves (eds.) Teacher development and educational change. Londen: Falmer.

Lieberman, A. (1995). Practices that support teacher development. Transforming conceptions of professional learning. Phi Delta Kappan, 76, 591-596.

Little, J.W. (1993). Teachers' professional development in a climate of educational reform. Educational Evaluation and Policy Analysis, 15 (2), 129-151.

Little, J.W. (1990). The persistence of privacy: Autonomy and initiative in teachers' professional relations. Teachers College Record, 91, 509-536.

Louis, K.S. & Smith, B. (1990). Teacher working conditions. In: P. Reyes (ed.), Teachers and their workplace. Commitment, performance, and productivity. Newbury Park: Sage.

Merriam, S.B. & Caffarella, R.S. (1991). Learning in adulthood: A comprehensive guide. San Francisco: Jossey-Bass.

Mintzberg, H. (1979). The structuring of organizations. A synthesis of the research. Englewood Cliffs: Prentice-Hall.

Noe, R.A. & Wilk, S.L. (1993). Investigation of the factors that influence employees' participation in development activities. Journal of Applied Psychology, 78, 291-302.

Osterman, K.F. & Kottkamp, R.B. (1993). Reflective practice for educators: Improving schooling through professional development. Newbury Park, CA: Corwin Press.

Rosenholtz, S.J., Bassler, O. & Hoover-Dempsey, K. (1986). Organizational conditions of teacher learning. Teaching & Teacher Education, 2, 91-104.

Rosenholtz, S.J. (1989). Teachers' workplace: The social organization of schools. New York: Teachers College.

Rowan, B. (1995). The organizational design of schools. In: S.B. Bacharach & B. Mundell (eds.), Images of schools. Structures and roles in organizational behavior. Thousand Oaks: Corwin Press.

Rowan, B., Raudenbush, S.W. & Kang, S.J. (1991). Organizational design in high schools: A multilevel analysis. American Journal of Education, 99, 238-266.

Schaufeli, W.B., Daamen, J. & Mierlo, H. van (1994). Burnout among Dutch teachers: An MBI-validity study. Educational and Psychological Measurement, 54, 803-812.

Schaufeli, W.B. & Dierendonck, D. van (1993). The construct validity of two burnout measures. Journal of Organizational Behavior, 14, 631-647.

Smylie, M.A. (1992). Teacher participation in school decision making: Assessing willingness to participate. Educational Evaluation and Policy Analysis, 14, 53-67.

Söderfeldt, B., Söderfeldt, M., Muntaner, C., O'Campo, P., Warg, L. & Ohlson, C. (1996). Pychosocial work environment in human service organizations: A conceptual analysis and development of the demand-control model. Social Science & Medicine, 42, 1217-1226.

Southworth, G. (1994). The learning school. In P. Ribbins & E. Burridge (eds.), Improving education: Promoting quality in schools. Londen: Cassell.

Veldhoven, M. van & Meijman, T. (1994). Het meten van psychosociale arbeidsbelasting met een vragenlijst: De vragenlijst beleving en beoordeling van arbeid (VBBA). [Questionnaire social psychological work demands]. Amsterdam: Dutch Institute of Working Conditions.

Willis, S.L. & Dubin, S.S. (eds.) (1990). Maintaining professional competence. Approaches to career enhancement, vitality and succes throughout a work life. San Francisco: Jossey-Bass.

Interactive Panel Discussion: What Position Should AHRD Take in Developing Guidelines for Ethics / Integrity in AHRD?

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This session is designed to invite participation in the development of guidelines for ethics / integrity in AHRD. Panel members will present scenarios that cover ethical dilemmas related to research, teaching, practice, and consulting. Scenarios will be distributed for discussion in small groups. Co-chairs will facilitate plenary to generate suggestions for an AHRD publication that lays out the Academy's current thinking on focus and scope of guidelines, and reviews relevant literature.

This session is designed to be interactive. We invite participants to assist panel members in thinking through issues related to the development of a position paper by the Academy regarding guidelines for ethics / integrity in the field of HRD. Questions that we anticipate being answered include: (1) Is an Academy code needed, wanted, and useful? (2) If so, what should the scope of such guidelines cover? (3) What specific issues do Academy members face in relationship to their research, teaching, practice, and consulting? (4) What work by other authors and professional associations should be taken into consideration in a review of the literature for this publication?

The panel will be chaired by Victoria Marsick and Hallie Preskill. Scenarios will be written and presented by panel members to stimulate discussion. Panel members include: Victoria Marsick and Darlene Russ-Eft on ethical considerations in research; Neal Chalofsky and Karen Watkins on ethical considerations in teaching; Steve Rives and Peter Dean on ethical considerations in practice; and Michael Leimbach and Fred Otte on ethical considerations in consulting. Scenarios will be distributed at the session, so that participants in the session can form small groups for further discussion following the short presentations about scenarios. The session will conclude with a general discussion facilitated by the Co-chairs to draw out and synthesize results of small group discussions, and to generate suggestions to be taken into consideration in writing the Academy's position paper.

Background

The Academy of Human Resource Development opened its 1996 conference with a dialogue about integrity in the field of HRD. Concerns raised at the session were directed at a variety of ethical dilemmas that Academy members face: in research, in teaching, in practice, and in consulting.

It was suggested that the Academy consider publishing a set of guidelines for members of the Academy. A number of professional and academic associations have such guidelines, so questions were raised as to what such guidelines should cover that would not be duplicative and that would distinguish the Academy from other such associations. In addition, it became clear that several members of the Academy write about ethics and integrity in the field. Sessions at the Academy and its pre-conferences speak to the knowledge that some members already bring to this issue.

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At the 1997 conference, a lunch discussion was held to stimulate interest in these questions, and to focus the work of the Academy. A theoretical framework was used to launch the discussion drawn from Bommer, Gratto, Gravander, and Tuttle (1987). This framework looks at the decision making process for ethical and unethical behavior in organizations. It takes into consideration the perception and degree of influence on such decisions from the many actors and forces bearing on this complex process: work environment, government and legal environment, social environment, professional environment, personal environment, and individual attributes of decision makers. While useful, this framework did not serve to narrow the focus of our discussion. In effect, it broadened our focus.

Over the past year, several conversations have been held among participants from these discussions via phone and email. A group of us decided that, to create a framework for guidelines for the Academy, it would be useful to engage a broader range of Academy members in the discussion about focus and limits. We also decided to contextualize the discussion by asking a panel of members to develop scenarios in which they have faced ethical questions in their research, teaching, practice, and consulting.

Session Design

Eight HRD researchers have prepared short scenarios describing experiences where their ethics/integrity have been challenged. In order to allow for as much conversation as possible regarding a code of ethics/integrity for AHRD, the scenarios will cover ethical dilemmas in four areas: 1) Research; 2) Teaching; 3) Practice; and 4) Consulting. Guidelines for the areas to be addressed in these scenarios include the following: what happened, who was involved, why it was an ethical dilemma, what the person did, and how that person made their decision.

The Co-chairs of the session will request that each "presenter" provide a synopsis of the ethical dilemma represented in their scenario. Audience members should have the complete write-ups in the conference proceedings – we would like to see this proposal and the scenarios as part of the proceedings. Approximately 30 minutes will be allocated for this part of the session.

After the scenarios have been described, audience members will be asked to get into one of four small groups (Research, Teaching, Consulting, Practice). The choice of group will be left up to the participants. In the small groups, each participant will be given a worksheet to document responses to the following question: "Should this area (e.g., Teaching) be addressed in the Academy's development of a code of ethics/integrity?" Participants will also be asked to identify ethical statements related to the particular area that should be included in such a code of ethics/integrity.

After approximately 20 minutes, participants will be invited to attend another small group to repeat the process. This will allow audience members the opportunity to discuss ethical issues (related to the scenarios) in the context of two areas such as Research and Consulting. (Total time = 40 minutes)

For the remaining 20 minutes, the Co-chairs will facilitate a large group discussion about next steps in the process of developing a code of ethics/integrity. Questions to be posed to the group include whether the resulting document should be called a code of "ethics" or "integrity"; which areas of focus are unique to the Academy; and what a publication on these issues might cover.

Results and Conclusions

The anticipated outcome of this session is a clearer conception of ethical issues AHRD members face and believe are important to developing a code of ethics/integrity for the Academy. In addition, the session will provide further direction for developing such a code.

Based on these discussions, members of the Academy will then develop guidelines for consideration by the Academy. In addition, it is anticipated that a few Academy members who research and write in this area will prepare a scholarly publication on this topic for the Academy. To this end, participants are invited to share information they have regarding articles and publications relevant to this topic, as well as scholars whose work should be consulted in a review of research and thinking on such codes of integrity / ethics.

References

Bommer, M., Gratto, C., Gravandar, J., & Tuttle, M. (1987). A behavioral model of ethical and unethical decision making. Journal of Business Ethic. 6. 265-280.

Assessing the Effectiveness of OJT: A Case Study Approach

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This study used a case study approach to assess the effectiveness of on-the-job training (OJT) in one product line of high tech manufacturing company. A literature review was conducted to identify the characteristics of successful OJT programs. Supervisors, trainers and trainees were interviewed regarding their perceptions of the OJT process. The results indicate there have been many inconsistencies in the implementation of OJT in this product line. Recommendations were made to incorporate greater structure in the planning, delivery and evaluation of OJT. It was also recommended that the organization explore interventions other than OJT programs for skill development.

The economy and changing marketplace have placed numerous demands on manufacturers. These demands have caused many manufacturers to increase flexibility in production and product delivery, expand use of advanced production technologies and increase responsiveness to customer needs. High performing, successful manufacturers depend on employees who can perform complex, ever changing tasks. The demand for employee expertise and the accompanying need to meet changing expertise requirements have placed greater emphasis on training programs to meet specific job requirements (Jacobs and Jones, 1995). Thus, manufacturers are finding several reasons to revisit their OJT (on-the-job training) programs. Costs, flexibility and immediacy are as relevant as ever in comparing OJT to other training options (Barron, 1997). In many manufacturing organizations, more than 80 percent of an employee's job knowledge and skills will typically be learned through OJT (Carnevale and Gainer, 1989). However, despite the widespread use of OJT in the workplace, there have been relatively few efforts to evaluate its effectiveness in light of changing performance requirements.

Company XYZ, a midwest manufacturer of supercomputers, is similar to most manufacturing companies in its use of OJT to develop employee expertise. In the past, this company has tried a variety of OJT approaches to train production workers, from informal activities to structured OJT programs. The late 1980s and the early 1990s proved to be difficult times for Company XYZ, both financially and emotionally. Layoffs, downsizing and budget cuts were all factors which directly affected major organizational functions, including training. During this time, training departments decreased in size and upper level support for training initiatives varied as management teams evolved. There was a need to evaluate current training activities, including OJT, to determine the value of these programs in developing skilled employees.

Problem Statement

Very little organized research has addressed the topic of OJT (Rothwell & Kazanas, 1994). Few studies have been conducted to evaluate the effectiveness of OJT programs in manufacturing industries. There are many reasons for the lack of interest in this type of research, including the emergence of technology-based training and the notion that OJT is often difficult to distinguish

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from actual work (Zemke, 1985). The purpose of this study was to evaluate OJT in the manufacturing division of Company XYZ. The results of this evaluation may be used to determine the appropriateness of the use of OJT and recommend improvements to current OJT processes.

Research Questions

This study sought to answer the following questions:
1.) What are the key characteristics of effective OJT programs as identified by the literature?
2.) What is the current state of OJT at Company XYZ as perceived by employees?
3.) How effective are OJT programs and activities in Company XYZ?
4.) What recommendations can be proposed to improve OJT in Company XYZ?

Methodology

This study was conducted using case study research methods. Case studies are one of the most prevalent formats for conducting HRD research (Marsick & Watkins, 1997). The case study method may be utilized to investigate a contemporary phenomenon within its real-life context and to describe the unique experience of employees in a given organization (Marsick & Watkins, 1997). In this study, the case study method was used to develop an assessment process for OJT.

The researcher used the following procedures to conduct the case study (Stake, 1994). First, research questions and assumptions were identified. Next, a literature review was conducted to identify the key characteristics associated with effective OJT programs (Jacobs and McGiffin, 1987). The information obtained in the literature review was used to create the interview guides. Separate guides were created for each group interviewed: supervisors, trainers and trainees. A sample was selected and structured interviews were conducted to collect primary data for the study.

A total of 24 employees participated in the interviews: 8 supervisors, 8 trainers and 8 trainees. Each of these employees worked on one of the most mature production lines in the company. Employees from this product line were chosen because the majority of OJT activities center around production workers and because this product line had a long history of OJT experiences. The supervisors that support the four functional areas in the product line were identified. Each supervisor was then asked to identify someone for performed OJT (a trainer) and someone who had received OJT (a learner) within the past six months.

Interview guides were created for each group. Each interview guide was pilot tested with production supervisors and manufacturing trainers who were not participating in the study. Feedback and suggestions for improvement were incorporated into the final instruments. Supervisors were asked about their perceptions and experiences in the following areas: knowledge of policies and procedures regarding OJT, supervisor's role in OJT, skills needed to perform OJT, selection of OJT trainers, planning for OJT, documentation of OJT, evaluation of OJT and rewards for participation in OJT and other training initiatives. Trainers and learners were asked about the same topics. All interviewees were also asked to provide any additional comments or concerns regarding OJT in their work area.

Twenty-four individual interviews were conducted from June 23 to June 27, 1997. Each interview lasted approximately one hour. The interviewer took notes and audiotaped each interview. After all of the interviews were completed, the responses were transcribed, sorted and compiled. Each group of respondents was analyzed separately. In addition, the data were analyzed for emerging patterns and trends across the three groups (Stake, 1994). Conclusions and recommendations were formulated based on the analysis and interpretations of the data collected. As suggested in the procedures for conducting a case study outlined in the *Human Resource Development Research Handbook*, as the data were analyzed and the themes emerged, the researchers went back to the literature for deeper understanding of the themes and to refine future directions (Marsick and Watkins, 1997).

Interview Results

Although there are numerous variations of OJT models, nearly all of the structured models examined in the literature contained the following key characteristics: documented OJT procedures and policies; a management structure with clear roles for supervisors and trainers; work, worker and workplace analysis; training plans; preparation for trainers; designated tools and materials; presentation formats; and evaluation procedures (Jacobs & Jones, 1995; Yang & McLean, 1996). Interview questions were designed around these key characteristics.

Common themes and responses appeared within each of the three groups of interviewees. The following section discusses the common themes surrounding several key characteristics, including documented OJT procedures, roles and skills of the interviewees, trainer selection and preparation, planning for OJT, tools and processes used in OJT, and evaluation procedures.

None of the employees interviewed identified any type of current written documentation concerning OJT policies and procedures. Thus, this product line lacks one of the key elements of an effective OJT training program. However, two respondents mentioned that job descriptions, written training and development plans and other types of documentation used to be available on earlier product lines.

The majority of respondents could clearly describe their perceived roles in the OJT process. In general, supervisors saw themselves as overseeing, monitoring and being ultimately responsible for OJT. However, some supervisors reported little or no involvement in this process. Based on these varying responses, it may be concluded that confusion exists around the role of the supervisor in OJT. The trainers described their role as training employees on how to perform their job efficiently and correctly. The learners believed their roles consisted of learning new tasks, asking questions and attempting to understand the information being presented.

All respondents agreed that there is no formal trainer selection process. Most trainers were selected by supervisors based on their amount of job experience, although both supervisors and trainers indicated that communication skills were the most important skills needed for training. Other skills identified were job knowledge, patience and the ability to simplify tasks. Therefore, it may be concluded that while supervisors know what trainer skills are the most important, they do not select trainers based on these attributes.

Planning for OJT also appears to be a struggle for many supervisors and trainers. Almost all supervisors identify conflicting goals between training and production. Many respondents described a constant tension between training employees and meeting production schedules. Comments such as "there is no plan," "we used to have a plan, but it lacked buy in and support" and "the production schedule always comes first, not training needs" were typical among both supervisors and trainers. Many employees believed that it would be difficult to structure OJT around the new product line due to the number of variations.

The use of processes, tools and materials for OJT varied greatly among respondents. The relationship between processes and tools appears to be direct. Respondents who described their use of training processes also discussed their use of tools and materials. Some trainers were using outlines, job aids, checklists and training matrices to monitor and track trainee progress. Other trainers did not use any processes, tools or materials for OJT.

One reason for this inconsistency may be that nearly all of the trainers developed their training skills on the job. These trainers may not have knowledge of formal training processes and tools. Most trainers said they had learned their roles through experience. Only one respondent had completed a formal trainer development class. However, several trainers mentioned that various tools and training materials had been available on earlier product lines.

There was wide variety in the trainee evaluation practices being utilized. Logbook entries, error recording, shift feedback, observation, questioning and inspections were all identified by supervisors and trainers as ways of obtaining feedback on learner skills. Although all of the supervisors and trainers discussed the importance of monitoring trainee progress, none of the evaluation techniques were used consistently. Few supervisors described a need to evaluate their trainers. Both trainers and trainees believed that their efforts to deliver or receive training would be tied to their performance reviews. However, supervisors had differing interpretations of how to compensate workers for these activities.

Discussion

The results of the study indicated that many inconsistencies exist in planning, preparing, delivering and evaluating OJT in the manufacturing division of the Company XYZ. Because this study involved only one organization, it has very limited generalizability. However, the results of this study are not different from the results of other similar studies which have attempted to evaluate the effectiveness of OJT. Several studies have found that in many organizations OJT lacks structure and does not operate within the context of the organizational work system (Jacobs and Jones, 1995).

Specific recommendations to provide greater structure to the OJT program at Company XYZ may include establishing written OJT procedures and policies, providing training for supervisors to clarify their role in OJT, developing a trainer selection process, providing formal training for new and existing trainers and creating an evaluation plan for trainers. A model for OJT could be developed that would include examples of OJT tools that would support the various phases of the process. The implementation of these recommendations would improve the effectiveness and consistency of OJT at Company XYZ, at least for a short time following the implementation of the new training, policies and procedures. However, based on past history and feedback from employees, there is reason to believe it would be difficult to sustain a structured OJT program at Company XYZ.

The individuals responsible for OJT at Company XYZ, and other similar organizations, should ensure the structured OJT process does not become especially lengthy or complicated. The more elaborate and specialized the OJT program, the more reasons supervisors and employees may find to keep it at arm's length (Sisson, 1995). As this study and others have indicated, many supervisors cite a lack of time as an obstacle to implementing structured OJT (Jacobs and Jones, 1995). Some organizations have begun to involve more employees in the design of structured OJT programs as input from employees at all levels of the organization may help assure that the programs have realistic goals and procedures (Walter, 1996).

Structured OJT systems have changed very little since the job instructor training (JIT) approach widely practiced in the 1940s (Sisson, 1995). Although it is recognized that these multiple-step programs do produce skilled employees, in many organizations there is insufficient time to implement the programs properly. What is needed today in many organizations are OJT systems that are so well integrated into existing learning and work processes that OJT does not appear to be a "special HRD program" (Sisson, 1995). The most effective OJT program may be one that has lost its own identity and is simply part of the work system (Sisson, 1995).

Over the past 50 years, there has been little research undertaken in the whole area of OJT (Rothwell & Kazanas, 1994). Most of the literature on OJT consists of descriptions of how structured OJT programs were designed, delivered and perceived by employees in various organizations. There is a need for research that goes beyond the descriptive level. OJT must be evaluated rigorously and objectively in terms of its of its contributions to the organization's learning and performance goals (Jacobs and Jones, 1995). Although structured OJT is a powerful training tool, it may not be the most appropriate tool for enhancing performance in some work environments, particularly with jobs that involve high levels of cognitive processing that should be practiced in authentic complex environments (De Jong, 1996).

Since structured OJT was introduced in organizations, there have been many research advances in the areas of adult learning and performance technology. These advances have allowed researchers and practitioners to design new strategies for enhancing learning and develop new technologies for supporting performance. Yet many organizations continue to rely on traditional training approaches and fail to utilize new systems that integrate learning and work, despite the inability of employees to implement the traditional systems properly in their current work environments. The most innovative companies focus on developing the knowledge and skills of workers by providing learning and performance support, not structured training (Reinhart, 1997). As companies, such as Company XYZ, attempt to evaluate their current HRD processes and programs in light of changing performance requirements, there is a need to critically examine the role of structured OJT in developing skills and enhancing performance. In some cases, the time and effort spent on structuring or restructuring traditional OJT programs may be better spent on developing integrated, sustainable systems for learning and performance support.

References

Barron, T. (1997). A structured comeback for OJT. *Technical and Skills Training, 8*(3), 14-17.

De Jong, J.A. (1996). Job instruction reconsidered: Usefulness and limitations of the dominant type of structured OJT. In E. Holton (Ed.), *Proceedings of the 1996 Academy of Human Resource Development Conference*, 235-240.

Carnevale, A.P. & Gainer, L.J. (1989). *The learning enterprise*. Alexandria, VA: American Society for Training and Development.

Jacobs, R.L. & Jones, M.J. (1995). *Structured on-the-job training: Unleashing employee expertise in the workplace*. San Francisco, CA: Berrett-Koehler.

Jacobs, R.L. & McGiffin, T.D. (1987). A human performance system using a structured on-the-job training approach. *Performance and Instruction, 25*(7), 8-11.

Marsick, V. & Watkins, K. (1997). Case study research methods: In R. Swanson and E. Holton (Eds.), *Human resource development research handbook*. San Francisco, CA: Berrett-Koehler.

Reinhart, C. (1997). No more sheep dipping. *Training and Development, 51*(3), 46-51.

Rothwell, W.J. & Kazanas, H.C. (1994). *Improving on-the-job training*. San Francisco, CA: Jossey-Bass.

Sisson, G. (1995). [Review of the book *Structured on-the-job training: Unleashing employee expertise in the workplace*]. *Human Resource Development Quarterly, 6*(3), 320-323.

Stake, R.E. (1994). Case studies. In N.K. Denzin & Y.S. Lincoln (Eds.), *Handbook of qualitative research methods*. Thousand Oaks, CA: Sage.

Walter, D. (1996). A model for team-driven OJT. *Technical and Skills Training, 22*(10), 93-98.

Yang, J.C. & McLean, G.N. (1996). Structured on-the-job training competencies. In E. Holton (Ed.), *Proceedings of the 1996 Academy of Human Resource Development Conference*, 241 -247.

Zemke, R. (1985). In search of a training philosophy. *Training, 22*(10), 93-98.

Linking HRD to Agents' Performance in the Insurance Industry

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Two studies provide information on the nature and extent of insurance industry training or property/casualty and life/health agents, including kinds and amounts of training provided, content of training, and methods used. They show that the industry sees training as a way of addressing performance problems, including legal compliance, attracting and retaining good agents, market complexity issues, and market conduct.

The ability of an insurance company to sell its products is, to a great extent, dependent on the effectiveness of its agents. For the majority of companies, agents are the most important point of contact with individuals and businesses representing the market for the companies' products. What agents do and how they represent the company have an immediate effect on the company's sales and income for the period and a longer term effect on the company's image and its future profitability.

Related Literature

Very little information has been published about the training and education of agents provided by insurance companies. A recent review of the literature indexed in the *Business Periodicals Index* yielded over 100 articles in the last ten years, but closer examination of those articles indicated that they contained little substantive information about agent training. What the literature did do was to identify a number of potentially problem perfomance areas for agents that may be addressed, at least in part, by training. Some of these issues included compliance with regulations, attracting and maintaining a strong sales force of agents, the increasing complexity of the marketplace, and market conduct.

Legal Compliance. In the United States, insurance companies and their agents must comply with a complex set of regulations imposed by each state and the federal government. State requirements frequently mandate both pre-licensing training and continuing professional education for agents. Many states have increased education and training requirements for intitial and continued licensing of insurance agents. More stringent regulation is often seen as a response to a general lack of public confidence in the industry's representatives. Continuing education requirements are seen as necessary to professionalism and good front-end training could do a lot to prevent the kinds of damage to the industry's reputation done by poorly prepared agents (King, 1990).

Attracting and Retaining Agents. Several studies suggested that the right training could help companies attract and keep good agents (Wellstead, 1992; Dempsey, 1994; McElroy, et al., 1993). Mc Elroy, et al. (1993) found that the probability of remaining in the profession is positively related to job involvement and professional commitment. They suggested that companies and agencies should spend training resources on activities that enhance these attributes, including such things as increased product knowledge, enhanced self-esteem, reducing role ambiguity and mentoring. These suggestions would seem to be consistent with the views of workplace HRD as empowering and leading to greater professionalism as well as greater commitment to the organization (Dirkx, 1997). As agents' compensation is generally derived from commission on sales, it seems logical that if agents and prospective agents perceive that company

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sponsored training contributes to achieving success in selling products, that companies offering good training opportunities will be attractive to those agents and prospective agents.

Market Complexity. The insurance industry has been experiencing the same increases in concentration and resultant restructuring as other segments of the financial services industry. The array of products sold by the industry is broad, complex, and continually evolving to meet market needs. Agents require investment licenses to sell many kinds of insurance products today. The actual and potential future increases in the sales of annuities have created a need for agent training in both product knowledge and sales techniques for selling annuities (Dempsey, 1991). The growth of long term care insurance (LTC) has produced, in addition to increased revenues, some very negative publicity for the industry. Agents themselves are calling for more training related to LTC products and sales. Over 70% of 2000 agents surveyed said that they wanted sales support and training seminars (Koco, 1991).

Market Conduct. Several articles in *Consumer Reports* were critical of the practices of a sample of insurance agents. They found that the agents didn't know their products or the market, sold too little or too much coverage, and misrepresented aspects of their policies (King, 1991). Several well-publicized frauds involving agents of major insurance companies in recent years have eroded the public's trust in insurance agents. Recent allegations that Metropolitan Life has been misleading Florida policyholders into buying more expensive life insurance underscore the growing market conduct problems related to agents' sales practices (Scism, 1997).

Research Questions

Research to address these performance-related issues would appear to address the category "Linking HRD to Strategy" that was among the most highly ranked of current and future research topics identified by Wentling, et al. (1997). This paper addresses two kinds of research issues/questions. The first is to try to provide a more comprehensive picture of the nature and extent of agent training in the insurance industry, including kinds and amounts of training provided, content of training, methods used, and trends in agent training. Secondly, it examines the perceived relationships between HRD activities for agents sponsored by insurance companies and performance problems related to:

1. compliance with laws and regulations,
2. attracting and retaining good agents,
3. market complexity issues related to the new products developed to meet the increasing competition in the marketplace, and
4. market conduct issues related to maintaining and improving the good name of the company and its products.

Methodology

This paper presents data collected from a review of literature and from two surveys. The first survey consisted of a random sample of 100 property-casualty companies selected from those listed in *Best's Insurance Reports (Property/Casualty).* The preliminary survey instrument, including open-ended questions as well as forced-choice items, was reviewed by a panel of insurance experts. The instrument, a cover letter explaining the purpose of the study, and a return envelope were sent to the directors of agency training at each of the companies in the sample. A follow-up mailing was sent about six weeks after the first. A similar process was used in the second survey, sent to a random sample of 200 life-health insurance companies selected from those listed in *Best's Insurance Reports (Life/Health).* The questionnaire was revised slightly based upon information received from the first survey. The random selection process used in both surveys resulted in the selection of some companies that do not use agents to sell their products. Analysis of data was carried out separately for the two surveys as they represent two different sectors of the industry and because they were completed about two years apart. Data from the two surveys were tallied, with percentages calculated where appropriate. Responses to the open-ended questions were analyzed using qualitative analysis techniques.

Findings

Findings from the two surveys are presented below. Property/casualty and life/health findings related to the nature and extent of agent training are presented separately. Findings related to performance problems, somewhat preliminary at this point, represent analysis of the combined sets of data.

Property/Casualty Findings. There were 27 returns from the first survey, but four of them indicated that they did not use agents, leaving 23 usable returns (23%). Not all of those who responded answered all questions on the survey instrument. Seventy percent of the respondents indicated that training was offered for new agents. The majority of respondents (55%) indicated that new agent training was not required in any of the states in which they write business. Sixteen of the respondents (70%) indicated that training was offered for new agents. Of the 16 insurers responding to the question on length of training, 10 (62.5%) indicated that training was two weeks or more in duration. Therefore, 37.5% of responding insurers provided less that two weeks of training. Pre-reading was required by the majority of insurers, but 75% did not require field experience prior to training. Eighteen insurers indicated that policy analysis was their top priority in agent training. Eight insurers indicated that training on programming needs was provided, and only three provided coverage of competitor's products. Companies were almost evenly divided about administering exams in agents' training programs. The majority of insurers used full-time staff dedicated to agent training and a majority (62%) indicated that they were offering more agent training than five years previously.

Methods used in sales and product training are presented in Table 1. The most heavily relied upon methods for both types of training were printed materials, closely followed by lecture/discussion, speakers, self-study materials, and videos. Mock presentations were used more frequently in sales training and computer simulations were more frequently used in product training. Only two firms reported the use of interactive multi-media in training.

Table 1 - Methods Used in Sales and Product Training

	Sales Training				*Product Training*			
	P/C[1]	L/H[2]	Comb.[3]	%	P/C	L/H	Comb.	%
Printed materials	18	19	37	88	18	22	40	95
Lecture/discussion	16	15	31	74	18	17	35	83
Mock/presentations	11	15	26	62	8	7	15	36
Videos	13	15	28	67	12	10	22	52
Speakers	14	14	28	67	13	13	26	62
Computer simulation	5	5	10	24	9	5	14	33
Interactive multimedia	2	3	5	12	2	4	6	14
Self-Study materials	12	16	28	67	14	17	31	74

[1] P/C = Property/Casualty, n = 19

[2] L/H = Life/Health, n = 23

[3] Combined, n = 42

Life/Health Findings. There was a 15% return rate for the second survey, however several of those responses indicated that they did not have agents, reducing the usable return rate to 12%. Again, not all respondents answered all questions on the survey instrument. Only eight respondents (34%) reported that agent training was mandated by a state within which they operated. Eighty-three percent of those responding provided training for new agents. Half required pre-reading before new agent training but only 33% required field experience prior to training. Ninety percent of responding companies provided training for continuing agents, but only about one-quarter required continuing agents to attend such training. Seventeen companies included policy analysis in their training, twelve included programming needs, and seven included coverage of competitor's products. Fifty-nine percent of those responding did not administer exams in their agent training programs. Fifty-five percent of responding companies were offering more training than five years previously, while 32% reported no change and 14% reported that they were offering less training than five years previously.

Survey results on methods used in sales and product training are presented in Table 1. Results were very similar to those from the property/casualty sector with print materials and lecture discussion being the most frequently used methods, closely followed by self-study materials. The most noticeable differences between methods used for sales and product training were that mock presentations and videos were noticeably more likely to be used in sales training. Computer simulations were equally likely to be used in the two types of training. Use of interactive multimedia in training of both types was lowest of all the methods listed.

Findings Related to Performance Problems. The preliminary findings related to performance problems come primarily from the thematic analysis of the responses to the open-ended questions on the instrument and the several new questions added to the second survey. The first study included only one open-ended question asking for comments on trends in agent training. The second survey added a second question asking respondents to comment on the most significant change in agent training in the company compared to five years previously.

Legal Compliance. More than one-third of the states in which respondents operated required training for new agents. Several respondents addressed this issue in their responses to the open-ended questions:

> "More resources are now dedicated to training, and compliance is a more significant challenge."
>
> "Compliance is probably the greatest immediate concern."
>
> "Constant monitoring to keep pace with new products, changes in tax laws, and compliance issues."
>
> "Much more training is required by the states prior to an agent obtaining their license."

Attracting and Retaining Agents. Several questions related to this problem were added to the second survey. Twenty-one of 23 respondents (91%) indicated that attracting and keeping good agents was a concern for their companies. Sixty-four percent said that training was *very important* to attracting and keeping good agents, while 32% said it was *important* and 5% said that it was not very important. Only 26% of responding companies have mentorship programs for new agents.

Market Complexity. On the first survey, 10% of respondents indicated that they were currently offering less training for agents than five years previously, 29% about the same amount, and 62% either a little more or substantially more. Results of the second survey indicated that 14% of respondents were offering less training than five years previously, 32% about the same, and 55% either a little more or substantially more. Responses to the open-ended questions indicated that training was seen as an appropriate response to issues related to market pressure. Comments included:

> "The success of a company will be determined by the training that is available, more training programs will be offered."
>
> "More emphasis on advanced markets."
>
> "Greater need but less time."
>
> "Less is required for the markets we're in; however, products are becoming more complex, requiring more sales literature."
>
> "Development of agent niche marketing is also important, as other sales sources evolve (banks, Internet, etc.)."

Market Conduct. In response to the open-ended questions on changes in training in the last five years and emerging trends in training, several respondents specifically mentioned that there was an increased need for training to address market conduct issues for agents.

Discussion

Although there had been no specific mention of any of the four problem performance areas in either questionnaire or the cover letters accompanying them, all four were mentioned explicitly in the answers to the open-ended questions. This shows that directors of agency training see a linkage between agent training and solving such performance problems.

An additional theme that emerged strongly in the responses to open-ended questions from both studies dealt with the need to develop more effective training. Several comments indicated a need to move away from passive training to achieve more invovement on the part of agents. Several suggested that there should be more use of computer- based training, and/or on-line, just-in-time materials. There were several mentions that the need for agent training had been increasing, but that resources (both financial and personnel) were declining.

The review of literature provided several articles on computer-based interactive multimedia, but very few firms from either study reported that such programs were being used for agent training in their companies. There is currently no information available to explain the low utilization of technology in training within an industry that is generally characterized as being high-tech.

The varied views expressed by companies about what is needed in agent training may reflect differences among the sectors of the industry (property/casualty versus life/health), changes over the two years of data collection, or differences in how they have been affected by such issues as changing regulation, market pressures, and the need to enhance the image of the agent and the industry with consumers. These issues provide further support for the argument that a higher level of professionalism is necessary among agents, and that additional training may be an essential component of that change.

References

Dempsey, Kay I. [1994] Instill agents with unconventional wisdom. *Best's Review* (Life/Health ed.). 95 (November): 86.

Dirkx, John M. [1997] To earn or to learn? The meaning of workplace learning in HRD. *AHRD 1997 Conference Proceedings*, Atlanta, GA: 668-674.

Howard, Lisa S. [1994] U. K. insurers' training costs soaring. *National Underwriter* (Life/Health ed.). 98 (October 3): 61.

King, Carole. [1990] Agent ed: too much too late. *National Underwriter* (Life/Health ed.). 94 (June 18): 13+.

King, Carole. [1991] Consumer's Union does hatchet job on LTC agents. *National Underwriter* (Life/Health ed.). 95 (June 17): 13+.

King, Carole. [1994] New York imposes $500,000 fine on Primerica Life subsidiary. *National Underwriter* (Life/Health ed.). 98 (November 7): 1+.

Koco, Linda. [1991] Agents want LTC training, survey says. *National Underwriter* (Life/Health ed.). 95 (January 7): 7+.

McElroy, James C., Morrow, Paula C., Power, Mark L., Iqbal, Zafar. [1993] Commitment and insurance agents' job perceptions, attitudes, and performance. *The Journal of Risk and Insurance*, 363-384.

Scism, Leslie. [1997] Florida regulators investigate Met Life. *The Wall Street Journal* [Nov. 6]: A3+.

Swanson, R. and Holton III, E., eds. [1997] *Human Resource Development Research Handbook*, Berrett-Kohler Publishers, San Francisco.

______. [1994] Travelers unit agents could lose licenses amid training probe. *The Wall Street Journal*. Eastern Edition (May 4): A4.

Wellstead, William R. [1992] A career track for sales agents. *Training and Development*. 46: 49-52.

______. [1992] A review of state continuing education requirements. Staff study by professional insurance agents of America (PIA):Alexandria VA.

Wentling, T., Brinkley, E., and Nelson, E. [1997] Current and future topics in human resource development: linking research with practitioner needs. *AHRD 1997 Conference Proceedings.* 601-608.

Total Quality Metrics: the revision of an instrument to measure the performance improvement in teams

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Teams are expected to provide organizations with benefits relating to the full utilization of the qualities of the team members, shorter lines of communication, more commitment to the organizational goals and an increase of the effectiveness of the organization. Polaroid Europe introduced so called Business Improvement Teams (BITs) to put the basic message of Total Quality Ownership into practice. A measuring instrument was designed and revised to enable the BITs to constantly improve their performance. This article is focused on the design and adjustments of the measuring instrument, called Total Quality Metrics.

It can be argued that socio-technology forms the basis for the introduction of teams into organizations. Socio-technology is a design theory that originated in the 1950s. A study of British miners carried out at the end of the 1940s found that people who performed their jobs as part of a team functioned better than those who carried out their work alone. This manifested itself notably in higher productivity and lower rates of absence due to illness among the workers. This finding led to the development of the socio-technological design theory (Van Eijnatten, 1996; Tjepkema, 1997), in which the principles of minimal division of labor and maximum self-direction play a major role.

The term 'team' is defined in various ways. Hackman (1990), for example, defines a team as an intact, clearly-delimited system, within an organizational context, with dependence relationships between the participants, who play different roles, with clear job descriptions and collective responsibility.

Theoretical Background

Katzenbach & Smith (1993) define a team as a small number of people with complementary skills, who are committed to shared objectives and a joint approach, for which they hold each other accountable.

When definitions of the term 'team' are analyzed for similar elements, a number of things become clear.

1. A team works from a previously defined objective towards a common output (Vroemen, 1995; Katzenbach & Smith, 1993; Senge, 1992). Moreover, it has been shown to be important for teams to continue to be involved in the goal-setting process, in order to ensure that the team embraces the objective both collectively and individually (Katzenbach & Smith, 1993).
2. Team leaders should possess a number of basic skills, as shown below (Vroemen, 1995; Katzenbach & Smith, 1993):
    - technical/functional skills, which are directly linked to the content of the work;
    - problem-solving/management skills that enable team members to solve problems effectively, to make decisions and to see to the planning and structuring of the work;
    - communication skills, such as listening, offering criticism, conflict management and discussion techniques.

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3. A team can function synergetically. Synergy is important for a team because the team needs to operate as one, so as to achieve "alignment" (Senge, 1992). Synergy is regarded as an important extra benefit to a team because it enables it to exceed the sum of its individual achievements (Mears, 1994).
4. There must be job dependence in a team. A distinction can be made between serial job dependence, where the output of one team member is the input of another, and parallel job dependence, where there is simultaneous effort (Vroemen, 1995). The extent of job dependence too may vary per team: in some teams, members are able to take over each other's jobs almost completely in the event of absence, which indicates a form of job design that is characterized by job rotation, job enlargement and job enrichment (Mears, 1994). In this last case there is a slight measure of job interdependence within the team, given that members are able to take over each other's jobs. However, it is also possible that team members complement each other in the performance of their jobs and that the absence of a team member may not be so easily resolved. In such a case there is extreme interdependence because team members are not able to take over each other's jobs.
5. A team should be of a certain size. Literature on this subject is somewhat ambiguous. As a lower limit, two members are mentioned, and twenty as an upper limit (Katzenbach & Smith, 1993). A minimum number of team members is important in order to be able to achieve job differentiation within a team; a maximum number of team members is advisable to prevent communication problems and the formation of subgroups.

The literature analyzed reveals that teams are expected to provide organizations with benefits relating to the following factors:

1. *Skills*: a team brings together complementary skills and experiences, which by definition exceed those of each individual team member (Katzenbach & Smith, 1993). Teamwork allows the qualities of the team members to be utilized to the full (Van Ewijk-Hoevenaars, Van Jaarsveld & den Hartog, 1995).
2. *Communication*: by developing collective objectives and strategies, a form of communication is created that provides a great deal of support when solving problems and exercising initiative. Within teams both vertical and lateral communication occurs, cross-departmental link-ups take place, more ideas are generated and, lastly, there is mutual respect (Mears, 1994). Teams also lead to a flatter organizational structure, resulting in shorter lines of communication and enabling decisions to be reached more quickly (Osburn, Moran, Musselwhite & Zenger, 1990; Van Ewijk-Hoevenaars et al, 1995).
3. *Flexibility*: there is a close link between clear communication and the flexibility of teams. As far as flexibility is concerned, teams are said to possess those skills, information and motivation which enable them to adapt easily to change, thus allowing the organization to respond flexibly to changes coming from its surroundings (Osburn, Moran, Musselwhite & Zenger, 1990).
4. *Participation:* working in a team produces a positive effect on morale; it creates opportunities and provides a greater degree of job satisfaction (Mears, 1994). There is also a unique social dimension within a team which has a stimulating effect on the economic and management aspects of the work. Within a team there is a great degree of mutual trust, which can break down barriers (Katzenbach & Smith, 1993).
5. *Effectiveness*: working together in a team ensures that better quality solutions can be implemented and that there is 'process ownership', where the team as a whole bears responsibility for the entire manufacturing process. As a result, team members are more motivated to perform better and the effectiveness of the organization will increase (Osburn, Moran, Musselwhite & Zenger, 1990).
6. *Satisfaction*: a team derives more pleasure and satisfaction from its work than does a single individual. Customers will be more quickly satisfied since teams can generally react rapidly and respond to changes, which leads to improved quality being provided (Osburn, Moran, Musselwhite & Zenger, 1990).
7. *Commitment*: as a result of their greater responsibility, team members are more involved in the whole manufacturing process and will show more commitment to general organizational goals.

Den Hartog (In Van Ewijk-Hoevenaars et al, 1995), however, observes that the above benefits can only be achieved when teams operate in an integral vision of organizational renewal. What is important here, if long-term effects are to be achieved, is that teams are set up not only in accordance with the principles of work structuring, job enlargement, job enrichment and job rotation, but that they are also seen as an integral part of the organization. This involves a shared belief within the whole organization, from top management to shop floor, that teams are essential in order to be able to operate effectively as an organization.

Problem Statement

In 1992 Polaroid Corporation launched the Total Quality Ownership Awareness Program to make employees aware of the necessity for change and the role that they could play in this.

In March 1993 Polaroid Enschede (the Netherlands) took over the initiative from America to adapt the organization with the aid of Total Quality Ownership (TQO) to a dynamic environment, which is characterized by changing markets and increasing competition.

Total Quality ownership is interpreted within Polaroid Enschede (the Netherlands) as:
"The way in which we do business, both within the company and with others, so that we are always able to supply products and services which meet the expectations of our customers. These efforts are continually focused on achieving and maintaining the satisfaction of the shareholders, the customers and the employees of our company." (Polaroid Europa BV, 1996a).

A process of change such as TQO will develop by trial and error and will bring with it uncertainty and resistance. It is therefore important for all employees to be informed of the need for a process of change such as TQO. A so-called 'awareness-phase' is necessary to achieve this. This resulted in all Polaroid employees following a TQO Awareness Program, the aim of which was to make employees aware of the necessity for change and the role that each employee had to play in it.

After the 'awareness phase' had been completed, Polaroid Enschede embarked on the introduction of Business Improvement Teams (BITs) in 1994. A BIT is a team of between three and fifteen employees (the BIT-members) who, using TQO principles and the success factors related to these, supply a product or service to the customer. A BIT may be seen as a work unit within a department, where the employees have one or more work processes in common (for example, within the Assembly or Purchasing Department). By means of regular consultation in so-called BIT-meetings, activities are undertaken to continually improve not only the quality of products and/or services, but also the quality of the work process.

The aim of the BITs is to put the basic message of TQO into practice, as well as to create a consultation and communication structure and culture between different work units. The members of a BIT consult each other in a BIT-meeting, which is led by an immediate superior (the BIT leader) and an external advisor from the Training & Development Department. They work in accordance with a dynamic model consisting of four steps, aimed at both product and process:

Step 1: Review of team output

This step is characterized by an evaluation of the concrete result or product. Efforts should be made to find out if the goals set have been met, how the communication process has progressed (with both internal and external customers), what went well and what went wrong and what could be learned from all this.

Step 2: Review of teamwork

This step is characterized by an evaluation of the process by which the goals have been achieved. In doing this checks are made to see if there has been sufficient consultation, regular communications, clear objectives, cooperation or opposition, a smooth process, or conversely, individual efforts that have hampered cooperation.

Step 3: View of teamwork:

The work consultation (the BIT-meeting) provides an ideal opportunity to find out how people should work together, what role employees should play in this and how and with whom there should be communications. Making agreements about these matters has a positive effect on the cooperation process.

Step 4: View of team output
Objectives needs to be revised, with the results already achieved acting as the starting point. What is important is that objectives are clearly defined, that it is laid down how and when they should be achieved and that the allocation of people and resources is indicated.

The measuring instrument TQMetrics was designed to enable BITs to constantly improve within the framework of TQO (Polaroid Europa BV, 1996b).

TQMetrics is a measuring instrument, composed of links and sub-links, which uses eight critical success factors of teamwork to chart the performance of a team.

The critical success factors are:

1. Clear *communication*, aimed at both communication within the team and with other teams and managers.
2. *Cooperation*, both within the team and with other teams. A close partnership- relationship is important.
3. *Team goals*, drawn up in accordance with SMART-criteria (Specific, Measurable, Achievable, Result-oriented, Timebound).
4. A good partnership-relationship with the team's customers by means of a *customer-oriented approach*. This involves a clear and balanced cooperative relationship with the team's customers, both inside and outside the company.
5. *Supplier-oriented approach*, the same applies here as for the customer-oriented approach, but then only for suppliers inside and outside the company.
6. *Leadership* of the team should be even-handed and provide coaching, and a balance should be struck between the participatory, socio-emotional and job-oriented aspects of leadership.
7. *Work processes* that relate to the production of products and services. The design and implementation of these processes by team members have an influence on the team's performance.
8. *Continual improvement of the know-how and skill* of each individual team member, which again provides a greater guarantee of future success. By means of a complex and constantly changing environment, this know-how and skill are continually adapted and it is important that team members are open to new learning experiences.

The answers from the BITs can be input into a database program to generate reports. These reports then form the basis for formulating improvement opportunities, for example, as regards cooperation or communication within teams.

The quality of the existing TQMetrics was established in collaboration with the Training & Development Department of Polaroid Enschede, the Netherlands. TQMetrics was then revised in the sense that: (a) the missing essential indicators of effective team performance were added; (b) the reliability of TQMetrics was improved and (c) the validity and reliability of the revised instrument were established.

Research Design In order to be able to answer the research questions, first and foremost, the reliability and validity of the existing TQMetrics was established.

Next, a literature search was carried out into indicators of effective team performance, which were then compared with the indicators that formed the basis of the existing TQMetrics. The final results of these two activities have led to adjustments being made to the existing TQMetrics. These adjustments resulted in an updated TQMetrics, which was then evaluated with the aid of a sample survey of three BIT-teams.

The sample survey was made up of the three selected BIT-teams, since the remaining teams in the organization had only recently used the old version of TQMetrics. For reasons of validity, it was decided to exclude these teams from participation.

Then, using the SPSS statistical analysis program, reliability and factor analyses were carried out on the TQMetrics scales and sub-scales.

Finally, conclusions were reached on the basis of these statistical analyses and recommendations were then made to further improve the revised TQMetrics.

Research Findings

Reliability and Validation of TQMetrics A good measuring instrument is both reliable and valid (Spector, 1992). Reliability ensures that the instrument consistently measures a particular construct, but it does not ensure that it measures what it is supposed to measure. This last aspect relates to the term validity.

The reliability analyses of the TQMetrics scales and sub-scales were carried out with Cronbach's alpha technique from the Statistical Package for Social Sciences.

TQMetrics consists of eight scales, which correspond to the critical success factors for TQO mentioned above. Table 1 reflects the values of the scales that were calculated using Cronbach's alpha, the number of sub-scales and the number of items per scale.

Table 1. Survey of reliability analysis per questionnaire

Scales	*Cronbach's alpha*	*Number of scales*	*# Items*
1. Communication	.87	4	21
2. Cooperation	.89	6	20
3. Team objectives	.93	4	18
4. (Internal) customers	.94	5	20
5. (Internal) suppliers	.95	5	19
6. Work processes	.93	3	20
7. Leadership	.98	3	20
8. Continual improvement	.93	3	19

From the above data the average alpha proves to be .93. On the basis of the reliability analysis, it may be concluded that the scales are reliable (.70 is retained as the lower limit).

As far as the analysis of the sub-scales is concerned, it is notable that all the sub-scales have reasonable to high alphas (all above .70!), with the exception of the 'know your customers' sub-scale (from the 'Suppliers' scale); the 'respect and appreciation', 'meeting commitments' and 'accountability' sub-scales (from the 'Cooperation' scale); the 'measuring results' and 'communicating results' sub-scales (from the 'Team objectives' scale); and, finally, the 'know the customer's work process' sub-scale (from the 'Work processes' scale).

It was also established that a limited number of sub-scales contain too few items, which might partly explain the alphas that are too low.

During the validation of the existing TQMetrics, checks were made using factor analysis as to whether the eight scales are able to measure properly the underlying constructs.

To gain a clearer overview of the number of factors and the extent to which the variables (the various questions) load on this, a rotated factor matrix was carried out on the selected number of factors (Norusis,1993; Kinnear & Greay, 1994). The standard method that is used during rotation is the varimax method, which tries as much as possible to minimize the number of variables that load high on a factor. As a result, the factors can be better interpreted.

Two sorts of factor analysis were carried out. During the first, all the questions from TQMetrics were input one after the other, with the aim of finding out the number of underlying factors (scales) within TQMetrics. The second factor analysis consisted of analyses per existing scale, with the aim of discovering the number of underlying sub-scales within the TQMetrics scales.

The factor analysis that was carried out reveals that nine factors can be distinguished instead of the eight scales that occur in the existing TQMetrics. Table 2 shows three factors and the underlying constructs.

Table 2. Survey of definitive underlying factors

Factors	*Underlying constructs*
Factor 1	Leadership
Factor 2	Suppliers
Factor 3	Communication
Factor 4	Customers
Factor 5	Objectives
Factor 6	Continual improvement
Factor 7	Work processes/Tailoring to meet the demands and wishes of customers
Factor 8	Team's method of working
Factor 9	Active attitude

The data show that the questions from the original 'Communication' and 'Cooperation' scales all load on factor 3 (Communication) and that there is thus no separate 'Cooperation' factor. A second observation relates to the addition of a ninth factor, concerning the employees making an active contribution to team performance.

To sum up, with regard to the number of underlying sub-scales per scale, the analysis results indicate that the number of existing sub-scales per scale (in the present TQMetrics) is generally too high.

Indicators of Effective Team Performance A thorough literature search, focused on the concept of team performance, resulted in a new list of 21 indicators of effective team performance being drawn up. This relates to the following indicators: 1) size of team, 2) involvement of team members; 3) internal team communication; 4) organizational culture; 5) explicit job description; 6) clarity as regards desired behavior; 7) conflict management; 8) leadership; 9) basic skills; 10) procedures/methods of working; 11) shared aims; 12) joint responsibility; 13) flexibility; 14) delegation of competencies; 15) (on-the-job) training; 16) support; 17) achievement standards; 18) feedback; 19) cooperation with other teams; 20) remuneration structure; 21) logical job design.

This list of indicators, together with the final results of the reliability analyses and the validation of the scales and sub-scales, will serve as input for revising the existing TQMetrics.

The Revision of TQMetrics A comparison of the success factors used during the development of the present TQMetrics with the list of indicators of effective team performance drawn up on the basis of a literature search has resulted in a list of supplementary substantive demands which the revised TQMetrics must meet. These are demands which required attention per scale category, mainly in the form of the transfer of existing items to other (sub)scales and the addition of new items about missing (aspects of) indicators.

On the basis of the reliability and factor analysis carried out of the scales and sub-scales of the existing TQMetrics, recommendations were made in order to achieve a new scale and sub-scale ranking; the number of scales remained as it was at eight. The demands and recommendations were discussed with two employees from Polaroid Enschede's Training & Development Department and, finally, a new TQMetrics prototype was drawn up.

Evaluation of the New TQMetrics Prototype The TQMetrics prototype was sent to the three selected teams (from the same department), with a total of 45 employees. The data from the questionnaires that they returned were then analyzed for reliability with Cronbach's alpha (from the SPSS-offer). This involved two analyses being carried out: one on the scales and one on the sub-scales.

The results of the reliability analysis on scale level are shown in Table 3.

Table 3. Survey of reliability analysis scales updated version of TQMetrics

Scales	Change in Cronbach's alpha			Change in items
	old alpha		new alpha	
1. Communication	.87	→	.90	21 → 18
2. Cooperation	.89	→	.89	20 → 21
3. Team objectives	.93	→	.93	18 → 16
4. Internal customers	.94	→	.93	20 → 16
5. Internal suppliers	.95	→	.91	19 → 12
6. Work processes	.93	→	.87	20 → 20
7. Leadership	.98	→	.95	20 → 19
8. Continual improvement	.93	→	.97	19 → 14

Table 3 also shows the old and new alphas and the changes that have occurred in the number of items.

As regards the reliability analysis of the scales, it can be said that reliability is still very high, compared with that of the old TQMetrics, which indicates that the reliability of the scales is good. The average alpha of the TQMetrics scales was .93, the average alpha of the new TQMetrics scales is .92. On average, thus, the alpha has decreased slightly. It should, however, be noted here that this may be linked to the fact that the reliability analysis of the new TQMetrics was carried out on a selection of three teams from one department with a total of 45 test subjects, whereas the reliability analysis of the old TQMetrics was carried out on a total of 352 test subjects from all departments. The difference in the size and representation of the sample survey may serve as an explanation for the (slight) drop in the alpha of the new TQMetrics sub-scales.

The results of the reliability analysis at sub-scale level have been incorporated into Table 4.

The results of the reliability analysis of the sub-scales of the new TQMetrics compared with those of the old TQMetrics are more striking. In general, it can be said that the sub-scales have somewhat decreased in reliability. An exception to this are the eight sub-scales that have increased in reliability and the two sub-scales that have decreased in reliability. As already mentioned above, one explanation which may be given for this decrease in reliability is the fact that the new TQMetrics was only tested on 45 subjects, compared with 352 in the old TQMetrics. An additional factor is that many sub-scales decreased in the number of items, which may also explain the decrease in the reliability of a number of sub-scales, since a longer test (with more items) is generally more reliable (Allen &Yen, 1979). Furthermore, it appears from a closer analysis of the scoring behavior of the 45 test subjects that about half may well have answered in a socially desirable manner. This is caused mainly by one specific team that is perceived as "very law-abiding". This too may serve as a possible explanation for the decrease in the reliability of the sub-scales.

Conclusions and Recommendations In this present study efforts were made to discover whether the existing TQMetrics met reliability and validity requirements and whether TQMetrics was based on indicators of a sufficiently high quality.

On the basis of a literature search TQMetrics was deemed not to include all the aspects of effective team performance. Despite the fact that the scales in TQMetrics had a high degree of reliability, the reliability of the sub-scales could be considerably improved. The same applied to the validity of TQMetrics. The validity of TQMetrics was reasonable, but could be substantially improved by a change in the composition of the sub-scales.

The revised TQMetrics was then evaluated, from which it could be concluded that the updated version contained the correct indicators of effective team performance and proved to be a reliable measuring instrument. The fact that a number of scales and sub-scales have a lower level of reliability than in the old version of TQMetrics may be attributed to the sample survey of three teams. The number of respondents involved in this sample survey is much smaller than the

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number of respondents on which the reliability of the old version of TQMetrics was based. Secondly, a large number of sub-scales in the updated version of TQMetrics consist of fewer items than was previously the case. Thirdly, the socially desirable answering behavior of the respondents may well have played a role. A fourth factor is the standardized nature of the work process of the evaluation groups, which is partly at variance with the basic principles of team work. Finally, it can again be observed that the sample survey is not representative of the total number of teams within Polaroid Enschede.

The above statements may be regarded as possible causes of the decrease in the reliability within several scales and sub-scales of the new TQMetrics compared with the old version. It is therefore to be recommended, in due course, when a representative number of employees and teams have filled out the updated TQMetrics, that the reliability and validity of the measuring instrument are again studied in order to be able to reach valid conclusions.

Table 4. Survey of reliability analyses sub-scales updated version of TQMetrics, in comparison to old reliability

Sub-scales	Changes in Cronbach's alpha			Changes in items
	old alpha		new alpha	
Communication				
• Horizontal communication	.78	→	.81	10 → 8
• Team consultation	.88	→	.76	17 → 5
• Openness in the team	.75	→	.79	7 → 6
Cooperation				
• Cooperation in team	.85	→	.78	11 → 6
• Cooperation with other teams	.89	→	.80	13 → 4
• Responsibility	.63	→	.66	4 → 4
• Respect and appreciation	.40	→	.54	3 → 6
Team objectives				
• Formulate objectives	.85	→	.84	6 → 4
• Communicate objectives	.77	→	.79	3 → 4
• Operationalize objectives		.85 (new)		4
Internal customers				
• Know your customers	.73	→	.88	5 → 9
• Meet expectations	.88	→	.88	3 → 4
Internal suppliers				
• Know your suppliers	.63	→	.84	5 → 9
• Communicate expectations	.77	→	.86	9 → 8
Work activities				
• Know your work process	.84	→	.41	3 → 5
• Improve work processes		.85 (new)		7
Leadership				
• Participatory leadership	.86	→	.84	5 → 5
• Soco-emotional leadership	.97	→	.93	11 → 10
• Job-oriented leadership	.94	→	.82	4 → 6
Continual improvement				
• Willingness to change	.82	→	.43	9 → 4
• Open attitude to learning	.90	→	.91	11 → 7
• Team learning	.82	→	.77	2 → 4
• Active attitude		.66 (new)		5

References

Allen, M.J. & W.M. Yen (1979). *Introduction to measurement theory*. Monterey, California: Brooks/Cole Pub. Co.

Eijnatten, F.M. van (1996) *Sociotechnisch ontwerpen* [Socio-technological designing]. Utrecht: Uitgeverij Lemma BV.

Van Ewijk-Hoevenaars, A.M., Jaarsveld, J.C.M. van & J.F. den Hertog (1995). *Naar Eenvoud in Organisatie: Werken met zelfsturende eenheden.* [Towards Simplicity in Organization: Working with self-directed units]. Deventer: Kluwer Bedrijfswetenschappen.

Hackman, J.R. (Ed.) (199). *Groups that work (and Those That Don't): Creating Conditions for Effective Teamwork.* San Francisco: Jossey-Bass.

Katzenbach, J.R. & D.K. Smith (1993). *Het geheim van teams. Een bedrijf van wereldklasse creëren.* [The secret of teams. Creating a world-class company]. McKinsey & Company, Inc.

Kinnear, P.R. & C.D. Gray (1994). *SPSS for Windows made simple.* East Sussex: Psychology Press Publishers.

Mears, P. (1994). *Organization Teams. Building Continuous Quality Improvement.* Florida: St. Lucie Press.

Norusis, M.J. (1993). *SPSS for Windows: Professional Statistics, Release 6.0.* Chicago: SPSS Inc.

Orsburn, J.D., Moran, L., Musselwhite, E. & J.H. Zenger (1990). *Self-directed work teams: the new American challenge.* Illinois: Business One Irwin.

Polaroid (Europa) B.V. (1996a). *Total Quality Ownership Awareness Training. Introductie tot Total Quality Ownership. Deelnemers Werkboek.* [Total Quality Ownership Awareness Training. Introduction to Total Quality Ownership. Participants' Workbook. Enschede: Polaroid (Europa) B.V., Training & Development Department.

Polaroid (Europa) B.V. (1996b). *Total Quality Metric. Het eigen teamwerk gemeten.* [Measuring one's own teamwork]. Handleiding TQMetrics. Enschede: Polaroid (Europa) B.V., Training & Development Department.

Senge, P.M. (1992). *De Vijfde Discipline; de kunst en praktijk van de lerende organisatie.* [The Fifth Discipline: the art and practice of the learning organization]. Schiedam: Scriptum Books.

Spector, P.E. (1992). *Summated Rating Scale Construction: an Introduction.* (Sage University Paper Series on Quantitative Applications in the Social Sciences, series no. 07-082). Newbury park, CA: Sage Publications, Inc.

Tjepkema, S. (1997). Zelfsturende teams: naar synergy tussen leren en werken? [Self-directed teams: towards synergy between learning and work?]. In: *Opleiding & Ontwikkeling, April 1997.*

Vroemen, M.W. (1995). *Werken in teams.* [Working in teams]. Deventer: Kluwer Bedrijfswetenschappen.

Technical Training Program Evaluation: Present Practices in the U.S.

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This study sought to determine the types of evaluation practices being employed to evaluate technical training programs in the United States and the degree to which various evaluation practices were being utilized. Technical trainers were surveyed because technical training is often believed to be easier to evaluate and no prior research was available. Data were gathered on the types and methods of evaluation used, reasons for not evaluating, organizational training practices and selected demographic information. The survey findings supported the lack of training evaluation reported in other more broad studies. These findings suggest a new research agenda on organizational training decision processes is needed.

It is now well established in HRD research that many training programs are not evaluated. It has become a common lament of HRD researchers that evaluation is essential for effective HRD, but not often conducted. One barrier often mentioned is that evaluation is too difficult because the outcomes of training are hard to identify. For example, management training and soft skills training have less clear outcomes. On the other hand, evaluating training for those whose work produces objectively measurable outcomes, such as technical or clerical employees, lends itself to quantitative evaluation. Technical workers produce goods, construct physical works (public or private), repair machines, operate equipment, and develop computer programs. All of this work produces objectively measurable outcomes. The ability to do each of these jobs can be evaluated using objective outcomes.

Because technical training is designed to produce objectively measurable changes in skills and knowledge, it would be logical to think that evaluation would be more commonly conducted on technical training courses if, in fact, the difficulty of identifying training outcomes is a key barrier to evaluation in practice. Unfortunately, no prior research has established whether technical trainers' evaluation practices are similar or different.

The purpose of this study was to examine evaluation practices of technical trainers. More specifically, the study addressed the following research questions:

1. To what extent are each of the four levels of evaluation, as defined by Kirkpatrick(1994), used to evaluate technical training in business and industry?
2. What impediments exit to the use of evaluation at all levels?
3. What methods are used at levels 2,3,and 4 ?
4. Is there a relationship between selected demographics, training practices, and the value placed on training by training managers, and what levels of evaluation are used?

Related Literature

The use of evaluation in business and industry represents a subset of the broader field of evaluation literature with a greater emphasis on summative measures rather than formative measures. Several authors have commented on the use of evaluation by business and industry. The focus of most evaluations in business and industry is on measuring a program's effect on (a) the participants,

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(b) the participant's work, and (c) the organization (Brinkerhoff, 1991; Broad & Newstrom, 1992; Dixon, 1990; Kirkpatrick, 1994; Phillips, 1991).

"It's probably fair to say that the bulk of all employee training programs conducted in the United States are evaluated only at level 1, if at all. Of the rest, the majority measured only at level 2" (Gordon, 1991, p.21) Very little training evaluation is accomplished across American industry. (Dixon, 1987; Phillips, 1991; Robinson & Robinson, 1989). Dixon (1987) observes that when evaluation is done, the participant reaction form is the most frequently used vehicle. This observation has been confirmed by others.

Robinson and Robinson (1989) reported that in a survey of 150 training directors, 77% reported using level 1 evaluation in 81 to 100% of their courses. Ninety-seven percent reported using level 1 evaluation to some extent in their training courses. In technical training, use of level 1 evaluation may be even lower. The Corporate HRD Executive Survey of the American Society of Training and Development (1989), reported that in technical training only 57% used participant reaction forms. This survey reports a much lower use of participant feedback in technical skills training than in management training where the rate of participant feedback evaluation is 92%.

Robinson & Robinson (1989) report that only 36% of the training directors surveyed used level 2 evaluation in 60% or more of their courses. The ASTD Corporate HRD Executive Survey (1989) reports that for technical skills training, 45% of the companies used this form of evaluation. Survey Report #11 reflects a greater amount of evaluation at level 2 than do other surveys. This is not surprising in that technical training often lends itself to the use of objective measures. Likewise, the literature is replete with references on developing test of various types at this level.

Carnevele & Schulz (1990) place the use of level 3 evaluation at between 10 and 15% based on two different surveys. Robinson & Robinson (1989) report that six and 13% of training managers use level 3 evaluation for 80% of the courses taught. In the same report, 20% of courses were evaluated at level 3 by 31% of training managers. The ASTD'S Corporate HRD Executive Survey (1989) reported evaluation methods for level 3 were post course tests, performance records, and supervisor feedback reported by 37, 31, and 29 percent of the companies responding respectively.

Of the surveys found in the literature, only two reports discussed evaluation at level 4. Carnevale and Schulz (1990) report that "Employee training was only evaluated at the organizational result level about 25% of the time, despite new pressures on training practitioners to assess the economic worth of HRD activities." Robinson and Robinson (1989) report that for 80% of the courses taught, less than 6% of the training managers use level 4 evaluation and 59% of managers report never using level 4 evaluation. Most discussions of cost-benefit analysis or return on investment deal more with cost accounting for training than they do on estimating the dollar benefit of training.

Methodology

Survey Population and Sample The population for this study consisted of all U.S. business and industry providing technical training. The accessible population was the 2,569 U.S. business and industry organizations with ASTD members who were in the Technical and Skills Training professional practice area. To identify this population, all consultants, schools, and government organizations were removed from the ASTD mailing list for the Technical and Skills Training professional practice area. Schools and government organizations were removed because they are not members of business or industry. Consultants were removed because they are both businesses that train their own personnel and the personnel from other organizations. It was felt that they would provide a mixture of data from the two groups and would not be representative of business and industry. Population errors included some consultants among those surveyed because the business names and person's title did not provide information about the business' function. The data from these surveys were not used, but notes returned with the surveys supported the assumption that consultants were a special case and that the data collected from this group would include a mixture of internal and external training data.

When multiple members existed within an organization, the survey was sent to a single member. Selection was in the following order; (1) the member listed as managing or directing the technical training function, (2) highest position in the training function, (3) the position deemed most likely to be connected to technical training. For identical titles, the choice was made using a table of random numbers. Those with no title were used only if no other alternative was available. The organizations with no member's name listed were excluded from the sample, since there was no way to assure that each mailing went to the same person.

This accessible population was chosen because it should represent organizations in which those persons responsible for the technical training function are well informed as to the current practices in industry. As such, the population should report higher uses of evaluation than the total population. As low levels of use were expected based on the literature, this scheme provided a best case scenario of the use of evaluation in the technical training area.

A random sample was drawn from the accessible population. Sample size was 334 after using Cochran's formula for small populations and providing for a $p = .05$. Since this was expected to be a reluctant population, the entire population was randomized which allowed for replacement of those unwilling to participate and for frame errors. In a similar study, Gutek's (1988) original response rate was 18 % and after phone contact with all the non-respondents the final sample consisted of 46 % of the drawn sample. Schilling's (1991) original response rate from an unsolicited set of mailed surveys was 3 %. In that study, a non-random sample was used to increase the number of respondents.

Instrumentation and Data Collection The data for the study were collected by survey. The instrument was developed for the study and revised based on input from a review panel with representatives from university researchers, training managers, training specialists, and training experts from business and industry. The survey consisted of seven sections. Sections 1 through 4 included questions on the percent of programs evaluated at each Level, types of evaluations used, and reasons for not evaluating at each Level. Despite criticism of the four level model (Holton, 1996), it was used as an organizing framework because it is the most widely known model and technical trainers would be most familiar with it. However, explanatory text and examples were also included in case respondents were not familiar with the four level model.

Section five consisted of questions used to determine the training practices of the organization. Section six gathered information on the respondents' thoughts on the value of evaluation. Section seven gathered demographic data. Questions in sections five and six were used to gather information on evaluation practices that were not a part of Kirkpatrick's model.

The data collection procedure used was based on Dillman's (1978) TDM (Total Design Method) for mailed surveys. The survey was followed by a mailing of reminder cards to the entire sample one week after the initial survey was mailed. Three weeks after the original mailing, a second mailing of surveys to the non-respondents was sent with a new cover letter explaining the importance of their reply to the quality of the results of this study. Seven weeks after the first mailing, a second follow-up letter was sent to all non-respondents.

A random sample of 20 non-respondents was contacted by phone and asked to respond to a sample of 22 questions drawn from the original questionnaires. The questions used were selected based on their importance to the objectives of the study. If a non-respondent could not be contacted or refused to participate they were replaced.

Findings

A total of 146 surveys were returned for an overall response part of 42%. When adjusted for unusable or incomplete returns, a usable response rate of 35% was realized. Non-Respondents were found to differ significantly from respondents on only two of the 22 items (a) the percentage of programs in which evaluation was the first step in program development and (b) the percentage of programs dependent on evaluation for continued funding. Of the two, the most significant related to funding. Four percent of the respondents' programs were dependent on evaluation for continued funding while 35% of the non-respondent's programs were reported as depending on evaluation for continued funding.

Selected Demographics Responding organizations ranged in size from less than 50 employees to 50,000. Organizations ranging in size from greater than 100 employees to less than 5,000 accounted for 69% of the respondents.

Respondents were asked to indicate the industry group that best described the organization's function. Five function groups were each selected by more than five percent or more of the respondents. These were automotive, banking, chemicals and pharmaceuticals, computer-data processing, manufacturing, and utilities.

Research Question 1 - To what extent are each of the four levels of evaluation, as defined by Kirkpatrick (1994), used to evaluate technical training in business and industry? Two approaches are used to answer this question. First, the data is examined by percent of programs employing each level of evaluation. Then, the data are reanalyzed by percentage of organizations using each level to some extent.

Percent of Programs Evaluated For each of the four levels of evaluation, each respondent was asked to indicate the percentage of their training programs that employed each level of evaluation. This reporting scheme also permitted the classification of respondents based on their use, to any degree, of a particular level of evaluation. The mean percentage of programs indicating the use of level of evaluation to some extent is shown below and in Table .

Percent of Programs Evaluated at Each Level	**Level 1**	**Level 2**	**Level 3**	**Level 4**
	72.7%	47.1%	33.7%	20.8%

The declining degree of use from level 1 through level 4 is consistent with the literature thus suggesting that use practices in technical training do not differ greatly from that reported in the literature for training as a whole.

Table 1 - Frequencies and Percentages of Programs Using Four Levels of Evaluation for Selected Percentage Intervals

Intervals	Level 1	Level 2	Level 3	Level 4
0%	8.1%	16.2%	35.1%	46.8%
1-19%	7.2%	15.3%	14.4%	21.6%
20-39%	2.7%	11.7%	13.5%	9.9%
40-59%	9.9%	14.4%	16.2%	4.5%
60-79%	8.1%	13.5%	5.4%	6.3%
80-100%	64.0%	28.8%	15.3%	10.8%

Percent of Organizations Using Each Level When the data from percentage of programs using an evaluation Level is reported as the percentage of organizations using an evaluation Level, the definition of use greatly affects the outcome. The data collected in this study were separated into three use ranges. This was done by choosing three different minimum percentages of programs required to qualify a responding organization as using that level of evaluation. The organizations were separated into ranges using the following criteria:

1. organizations using the Level in any percent of their programs other than zero (some use)
2. organizations using the Level in 60 % or more of their programs (more than 60%)
3. organizations using the Level in 80 % or more of their programs (most)

Each range includes the respondents in the following range or ranges. This was done to match the following possible survey questions from other studies: (a) Do you use this Level of evaluation?, (b) Do you use this Level of evaluation in more than half your programs?, and (c) Do you use this Level of evaluation in most of your programs? Sixty and 80% were used as break points because they matched the breakpoints used in the survey's questions on methods and helps maintain consistency in reporting.

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Using 60% and 80% as minimum percentages of programs using a level of evaluation as criteria for concluding that organizations use a level produced numbers that closely match results reported elsewhere (Carnevale & Schulz, 1990; Dixon, 1987; Phillips, 1991; Robinson and Robinson, 1989; Corporate HRD Executive Survey, 1989). Those results that are directly comparable are displayed on Table 2.

Table 2 - Percentages and Frequencies for Organizations Using Each Level of Evaluation in Some, More than Half, and Most of Their Programs

Where reported	Proportion of Programs	Level 1 %	Level 2 %	Level 3 %	Level 4 %
Current study	Most (>80% of prog.)	64	29	15	11
	More than 60%	72	42	21	17
	Some (>0%)	92	84	65	53
Training Magazine (1996)	any percentage of programs > 0	86	71	65	49
Carnevale & Schulz, 1990	Unknown	75 to 100	100	10	25
Dixon, 1987	Unknown	100	30	15	
Phillips, 1991	Unknown	52		15 & 17	8 & 13

Research Question #2 - What impediments exist to the use of evaluation at all levels? For each level of evaluation respondents were asked why, on occasions when they did not evaluate at a particular level, did they elect not to evaluate. For each level a series of possible reasons was provided as well as an opportunity to supply a unique reason. Table 3 shows the results, with the top three reasons at each level underlined.

The most commonly reported reason for not evaluating across all levels was that it was not required by the organization (28.83 - 42.34%). The percent citing this reason was highest at levels 3 and 4. A lack of training was cited as one of the top three reasons for levels 2, 3, and 4. Cost was one of the top three reasons for levels 3 and 4.

Table 3 - Percent Not Evaluating at Each Level

Reason	Level 1	Level 2	Level 3	Level 4
Not required	28.83	36.94	44.14	42.34
Little Value	18.92	19.82	13.51	15.32
Cost	10.81	18.02	36.94	36.94
Not legally required	9.91	14.41	7.21	8.11
Lack of training	9.01	23.42	34.23	39.64
Time	8.11	21.62	3.60	5.41
Union	1.80	4.50	2.70	1.80
Prohibited	.90	3.60	1.80	1.80

Research Question #3 - What methods are used at levels 2, 3, and 4? Because space is limited, only summary information can be provided for this question. Use of the various evaluation types or methods was addressed in two different ways. The first measure was the percentage of programs using the method. The second was the amount of use by those organizations that reported using the method. It was therefore possible for a method to be used by a small percentage of the reporting organizations but to have a high percentage of use within those organizations using the method.

The Level 2 evaluation method reported as most used was skill demonstrations. This method was also used in the highest percent of programs by the organizations using the method. The second most common evaluation method at Level 2 was the posttest with no pretest. On-the-job demonstrations, simulations, and work samples were the methods used in the fewest number of programs and organizations. Common use of a method across organizations did not always indicate that a method was used regularly to evaluate programs. Post-tests were reported as used by well over half the organizations but were reported most commonly used to evaluate only one fifth or less of the programs taught by those organizations.

Observation was reported as the most commonly used Level 3 evaluation method. It was used by slightly over half the reporting organizations. Performance appraisals were the second most common evaluation method and were reported as used by slightly less than half the respondents. However, for the organizations using performance appraisals, they were reported as used in more programs than any other Level 3 method. Other methods commonly reported as used were existing records, records produced for evaluation, action plans, and performance contracts. Surveys and interviews were not commonly used.

Productivity estimates, productivity measures, and regulation compliance were reported as used by one third or more of the organizations for Level 4 evaluation. However, these three methods were only used in a few of the programs taught. ROI measures were used by less than one fifth of the respondents, but those using ROI used it in approximately half the programs taught. All other Level 4 evaluation methods were used in less than one fifth of the programs taught.

Research Question #4 - Is there a relationship between selected demographics, training practices, and the value placed on training by training managers, and what levels of evaluation are used? Exploratory correlations were run between various organizational variables and the four levels of evaluation. Recognizing that with many correlations, relationships may be a function of the number of correlations and not replicable in future studies. Strong correlations would have suggested areas for possible study future study. However, few significant correlations were found and only one exceeded .30 (see Table 4).

Table 4 - Significant correlations between organizational factors and evaluation practices

Organizational factor	Statistically significant correlations greater than .30
business and industry function	—
business and industry size	—
training manager's perceptions of the importance of a level	(some in the .20 range)
training manager's experience	—
length of time an organization had been training	—
training methods	—
training manager's perception of the importance of a level of evaluation in demonstrating value to mgt.	—
perceived importance in improving programs	—
programs delivered to change performance or org. outcomes	(some in the .20 range)
percent of staff involved in evaluation	level 1, r=.31, p<.01
percent of staff with formal training in evaluation	—
percentage of programs dependent on evaluation for funding	—
training managers' perceived values for each evaluation level	—

Conclusions

This study has confirmed other evaluation practice surveys. Its unique contribution lies in using a rigorous research design, and investigating technical training evaluation which is often thought to be easier to evaluate. By showing that even technical training is not evaluated any more often than general surveys have shown, this study provides even more convincing evidence that evaluation use is a major problem in HRD.

When following the literature back to the development of the four levels, there has been little change in the amount of evaluation within business and industry for at least the last 25 years. For example, Gutek (1988) cited a 1968 study that asked if organizations used each of the four levels. That study reported that 78 % used Level 1, 50 % used Level 2, 54 % used Level 3, and 45 % used Level 4. The usage in the older study is similar to that of this study for Levels 1 and 2 as discussed above but not for Levels 3 and 4. However, the older study stated that the evaluation at Levels 3 and 4 were superficial and subjective. Using a less strict interpretation of use to match the older study ("used in some of the organization's programs" or "used in more than half of the organization's

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programs") this study had a reported use of 21% to 66% for Level 3 and 17% to 55% for Level 4. The range of findings in this study include the values from this 25-year-old study. As early as 1953, Wallace and Twitchell (1953) were discussing the need for and lack of training evaluation. Today's literature contains parallel comments and the lack of training evaluation still exists.

A New Agenda for Training Evaluation Research?

It may be time to ask new questions about the use of training evaluation. Television news, news magazines, economic reports, management journals, training literature, politicians, and business leaders all discuss the need to increase the rate of growth in productivity, downsizing, cost-cutting, and ever increasing competitiveness. The training literature presents evaluation as a necessary component in providing training that can help organizations increase productivity, reduce the required number of employees, cut costs, and increase competitiveness. Yet, all the literature on how much evaluation is used by business and industry suggests that less than half of the training programs in place are evaluated for objective outcomes. Additionally, less than one third of training programs are evaluated in any way that measure changes in organizational goals or profitability. It is important to note that these studies all started with a trainer's notion of what constitutes effective evaluation, not a business managers'.

Either business and industry are not concerned with the costs and outcomes of training or they are using some other method of justifying costs and checking outcomes. After at least 40 years of bemoaning the lack of evaluation, supporting the value of evaluation, developing methods of evaluation, and pushing the evaluation cause, there appears to have been little change in the amount, types, or quality of evaluation in business and industry. As in many other endeavors, history keeps repeating itself. Program developers and trainers see the obvious value of evaluation because it would affirm the value of what they do and provide an objective basis for improving both programs and teaching.

However in the face of business and industry's resistance to formal evaluation, those in the training field must ask, is it truly possible that business and industry spend billions of dollars without verifying the value of what they purchase? This is highly unlikely. It is time to ask, "how are business and industry placing value on training?" instead of complaining that they do not evaluate training by the accepted methods reported in the literature. Additionally, it is worth asking why evaluations aren't recognized as a management tool?

Recent research in the use of utility analysis sheds some light on this problem. Utility analysis is a sophisticated technique to determine the dollar value (i.e. utility) of interventions that affect human performance (Cascio, 1991). In two experimental studies, managers were shown data on a new human resource practice (Latham & Wythe, 1994; Wythe & Latham, 1997). Some managers were taught how to interpret the utility analysis, which provided the best cost/benefit data. Control group managers were given other data that was less complete. Based on rational economic theory, it was expected that managers who would seek and use the best cost-benefit data available to make the decision. In both studies, exactly the opposite occurred! After learning about utility analysis, fewer managers preferred to use that data. For some reason, managers moved away from the more sophisticated tools once they learned about them. Statistical techniques such as statistical process control has also struggled to gain widespread utilization, perhaps because they are not strategic in their application (Hoerl, 1995).

This research raises puzzling questions and offers few answers. However, one can not help but wonder if something similar could be happening with training evaluation. Researchers interested in evaluation practices, such as this study, have typically started with some framework or lens that is presumed to be "correct" practice and then investigated the extent to which that framework is being used in practice. In training evaluation, the prescriptive frameworks have generally failed to be confirmed by practice. The usual interpretation has been that practitioners aren't doing what they should. An alternate interpretation may be that the models are not correct.

New research is needed that takes a more objective look at the decision and influence processes that managers use to make decisions about training. Such research should not start with a prescriptive framework, but rather study actual decision processes in action. Likely research questions would include:

1. What criteria are used to determine:
    - – whether training should be initiated?
    - -- whether training was effective?
    - -- whether training changed performance?
    - -- whether to continue using a form of training?
    - – whether to adopt a different method?
    - – whether to "buy" training services from a "seller"
2. How are best practices determined?
3. Who are the opinion leaders that most influence training decisions?
4. What are the actual decision steps used?
5. What factors or events lead to changes in training practices?

References

Brinkerhoff, R. O. (1991). Achieving results from training. San Francisco: Jossey-Bass.

Broad, M. L. & Newstrom, J. W. (1992). Transfer of training: action-packed strategies to ensure high payoff from training investments. Reading, MA.: Addison-Wesly.

Carnevale, A. P., & Schulz E. (1990). Economic accountability for training: Demands and responses. Training and Development Journal, 44(7), s-1 - s-32.

Cascio, W. F. (1991). Costing human resources: The financial impact of behavior in organizations. Boston: PWS-Kent Publishing Co.

Corporate HRD Executive Survey. (1989). Survey #11 Report. Alexandria, VA: American Society for Training and Development.

Dillman, D. D. (1978). Mail and telephone surveys: The total design method. New York: John Wiley & Sons. Inc.

Dixon, N. M. (1990). Evaluation: a tool for improving quality. San Diego: University Associates, Inc.

Dixon, N. M. (1987). Meeting training's goals without reaction forms. Personnel Journal, 66(8) 108-115.

Gordon, J. (1991, August). Measuring the goodness of training. Training, 30(8), 19-25.

Gutek, S. P. (1988). Training program evaluation: An investigation of perceptions and practices in non-manufacturing business organizations. Dissertation Abstracts International, 49/05A, 1040.

Hoerl, R. W. (1995) Enhancing the bottom-line impact of statistical methods. Quality Management Journal. Summer, 58-69.

Holton, E. F. (1996). The flawed four level evaluation model. Human Resource Development Quarterly, 7,

Industry report 1996. (1996, October). Training, 33(10), 36-49.

Kirkpatrick, D. L. (1994). Evaluating training programs: the four levels. San Francisco: Berrett-Koehler.

Latham, G. & Wythe, G. (1994). The futility of utility analysis , Personnel Psychology, 47, 31-46.

Phillips, J. J. (1991). Handbook of training evaluation and measurement methods. Houston: Gulf.

Robinson, D. G.& Robinson, J. C. (1989) Training for impact: How to link training to business needs and measure the results. San Francisco: Jossey-Bass.

Wallace, S. R. Jr.& Twitchell, C. M. (1953). Evaluation of a Training Course for Life Insurance Agents. Personnel Psychology, 6(1) 25-43.

Wythe, G. & Latham, G. (1997). The futility of utility analysis revisited: when even an expert fails, Personnel Psychology, 50, 601-610.

Mid-stream Corrections: decisions leaders make during organizational change processes

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Today's leaders often need to implement organizational change strategies such as: continuous quality improvement, re-organizations and changing performance norms. As these change initiatives are implemented, leaders are often faced with situations they did not anticipate. These moments provide opportunities to adjust decisions. An analysis of three organizational leaders will be used to determine if and how organizational leaders take corrective actions or make adaptations to their decision-making processes at these moments.

Various metaphors and images have been used to describe organizations and their leaders—from sports to music to physics (Marshak, 1994; Morgan, 1997). I will use the image of a football team quarterback to introduce my area of research. A football team's success depends on the ability of the quarterback and the coaching staff to anticipate, out-guess and "read" the other team's formations. Most coaches develop a game plan, a set list of plays, for the entire game. Individual plays may be directed or "called" by the quarterback in a huddle, signaled in from the sidelines to the quarterback or another player, delivered by a player coming in from off the sideline or even transmitted via wireless technology.

Sometimes, as the quarterback is getting set to receive the ball, the quarterback observes a particular formation on the opposing team and calls an "audible." This audible command alerts the team members that the original play is no longer valid and a new play has been substituted. Nothing is as interesting to me as the "audible," a decision made by the quarterback at the line of scrimmage as the play is about to unfold. This is a decision to disregard part of the game plan. If it works, the quarterback is a hero; if it fails, he is a goat.

This image describes an essential leadership skill—calling an audible—even when a good game plan has been designed. My research focuses on understanding the decision-making process that leaders go through in calling audibles; how do leaders decide to deviate from their game plans (particularly at the tactical level) or decide to remain with a pre-established implementation plan? This decision-making process is rooted in a leader's perception and interaction with a changing organizational context.

When organizational leaders are implementing organization-wide change programs such as continuous quality improvement initiatives, reorganizations or re-engineering, they are likely to have numerous opportunities to make "audible" calls. Therefore, this research will focus more narrowly on the decision-making processes of key leaders during the implementation process of change programs. It will examine how three different organizational leaders in different organizational environments chose to stay with the original game plan or to call an "audible." This will be done by breaking long term change processes into key decision points or "audible opportunities," as defined collaboratively between the researcher and the research participants. For example, a university chancellor prepares a plan to implement a comprehensive academic restructuring strategy. One third of the way into the process, a small but influential group of faculty form an AAUP chapter in a non-union environment. The chancellor, if aware of this action, may choose to ignore it, change the restructuring proposal, or adopt a new tactical plan to implement the proposed changes (other options are possible).

Much has been written about the subject of organizational change (Dunphy, Dexter & Stace, 1993; Tushman & Anderson 1997). Numerous articles and books have been written about diagnosing the need to change, developing change plans, selecting organizational change alternatives, the stages of organizational change and resistance to change (Kotter, 1996; Strebel, 1994). Case analyses have been produced to show how business changes are produced (Van De Ven and Poole, 1995).

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Considerably less attention has been paid to how changes occur once an implementation plan is initiated. As practitioners and academic professionals, we gravitate toward designing and defining *change outcomes* and evaluation measures more than *tactical implementation plans (change tactics)*. Frequently, change programs do not go according to plan; variations and detours occur along the way. While it is important to have a clearly defined game plan for introducing change, a leader must continually assess and reassess the organization's response to change *implementation* processes.

Research Questions and Hypotheses

The focal research questions are: 1) as organizational change initiatives are occurring, is the leader making judgments about the relative success/failure or progress/lack of progress toward change outcomes and 2) how is this information used to alter an implementation plan or reinforce the current plan? Three subsidiary sets of questions are also discussed:

A) if alterations are made, what rationale is used? What informs these decisions? Are these communicated to participants? If so, how?

B) if alterations are made, is the leader more likely to alter change outcomes, the process used to introduce change or the timetable for such change efforts (the latter two being viewed as change tactics)?

C) to what extent are change implementation processes and interactive changes in implementation decisions shaped by the characteristics of the industry in which the organization is situated?

These questions have served as the basis for developing interview formats with the research participants and to guide the data collection process.

It was hypothesized that organizational leaders continually monitor organizational responses to change implementation procedures and that adaptations will be made based on their perceptions of the organization. When adaptations were made, however, the rationale for the changes might not be apparent or communicated to organizational participants. It was further hypothesized that organizational leaders would generally opt for changing tactical implementation plans rather than revise the change outcomes. Finally, it was hypothesized that the individual's personal approach to change would have greater influence than the organization's industry characteristics in this decision-making process.

Methodology

Research Method. A qualitative research model is being applied to this research project. Two qualitative techniques are being utilized: a collective case study approach (Stake, 1995, p. 3-4) and a phenomenological analysis of the data collected (Moustakas, 1994). Coding of interview data will also be used but will play a secondary role. Only that portion of the organizational case studies related to leadership decisions is being presented in this paper.

Research Participants. Three different organizations and their leaders are involved in this study: a plastics manufacturer with 200 employees, a university with 2200 students and a police department with 70 officers. Each one of the organizations has been, is or will be completing organizational change processes. For purposes of this paper, the following summarizes the organizational contexts:

Organization	Leader	Characteristic	Issue
Plastics Manufacturer	Plant Manager	Business	Continuous Improvement
University	Chancellor	Collegial	Academic Restructuring
Police Department	Chief of Police	Hierarchical	Department Restructuring

These three organizations were selected because of their potential to provide insight into how particular leaders approach the change process. The different contexts in which the organizations are situated make generalizations more difficult. However, we can be more attentive to the way in which an individual leader interacts with his or her environment, including sensitivity to the industry context. As a researcher, I have had various levels of personal involvement in each organization ranging from outside observer to organizational member to consultant. All three organizations are located in the Midwest.

Data Collection. The data has been collected from the following sources: personal interviews with notes, video-taped interviews, copies of newspaper articles about the organizations and internal documents. In addition, a written questionnaire about decision-making style was completed by each of the organizational leaders prior to being interviewed. Between the three organizations, more than 50 interviews have been conducted and more than 15 meetings have been observed. These have been at all levels within the organizations. The research presented here is limited to available public information, questionnaire results and interviews with each of the three organizational leaders. More information will be presented in a second phase of the research. Negotiations are being completed to disclose the identity of each organization.

Data Analysis. A phenomenological approach to analyzing the data was chosen for several reasons. First, the nature of the subject matter itself heavily involves the observations, interpretations and evaluations of both the researcher and the participants. Second, as the researcher has had personal involvement with the organizations, it is a well-suited method. As noted above, where possible, a triangulation approach to data analysis will be taken. The focus, however, will be on understanding the observations and perceptions of the three key leaders in the study.

Results and Findings

Each organizational leader had a somewhat different approach to decision-making as might be suspected. The small sample size, three organizational leaders, makes it difficult to generalize about decision-making methods. Nevertheless, there were some common themes and a comparison of the three organizational leaders yields some interesting results. It is difficult to convey both some of the differences and the common points between the three while preserving the integrity of the data. I will present several different ways of portraying the data: narrative portraits of each leader's decision-making approach, graphic summary along various decision-making dimensions, and an identification of common themes. Then, these findings will be related to the hypotheses outlined earlier in the paper.

Narrative Portraits of Interviewed Organizational Leaders. These narrative portraits are built on the results obtained from completed written questionnaires, video-taped interviews and personal observations made in the respective work settings. Although they may not do justice to each of the individuals, they are designed to provide a sense of each individual. These are impressions and themes which have been made on the basis of the above sources. For each individual, there will be a general description and then a specific decision area will be used as an example.

Portrait One: Plant Manager. The plant manager has been with the company since January, 1996. He is one of the few managers who is not a family member. His managerial experience prior to his current assignment was with larger corporations. He was brought in with expectations that he would "take the plant to the next level" and upgrade the managerial quality of the manufacturing site. The plant manager's approach to decision-making is a mixed approach. The cornerstone of his process is on "creating the conditions" for people to come to the right decision. He has a strong conviction that if people are able to view the right information and if you can relate the decision to their values, the right decision will be made. One of his comments was "if everything has been done right, there is no trial balloon."

He focuses on three goals: customer service, quality and profitability. He notes that his ability to make decisions has been constrained by the availability of quality people, a situation that continues to improve over time. When he started his tenure, he was making many more decisions than he is today, particularly at the tactical level. He believes that the company runs best when he sets the general tone or direction and when the middle management crew develops the tactics. Presently, he believes that 90% of the decisions are now already made before they get to his desk, but that employees may not see this—they may still see him as making these decisions.

Being a past college football player, the plant manager thought the notion of audibles was great and explained also that the defensive units also called audibles. In fact, he says his offense was almost an entire series of audibles. He compares this to the sense of adaptability which successful managers must have. Much of his time is spent thinking about how he will approach issues and people who are influential in the decision process. He likes to stay on the course toward the goal and relentlessly pursue it—adjusting tactics or time frames as needed, but not adjusting the goal.

He describes himself as more intuitive, analytical, and willing to consider a number of alternative solutions to problems. He makes decisions both on his own and with consultation, views decisions as successive smaller events, and evaluates decisions very strongly in light of both personal and organizational values and beliefs. Decision outcomes are evaluated in relation to a plan.

One of the decision examples used was the implementation of a three day ship program for basic material. Customers have pushed for quicker lead times for material shipments. This program has been implemented within the past year and has had its ups and downs in terms of success. He acknowledges that people may have seen this as arising from the sales force or customer demand (external factor), but in fact, it is close to his personal goals. The program has been marked by an increasing number of on-time deliveries, but still short of 100%. There have been times during the implementation process where middle managers have suggested that the idea should be dropped. He cites this as an example where maintaining the goal is important, even if not fully accomplished. He continues to spend time with people, identifying what their personal values are and trying to relate the goals of the program to these values.

Portrait Two: University Chancellor. The Chancellor has been employed for more than twenty years at the institution in various teaching and administrative posts. He has served as Chancellor since April, 1995. The Chancellor sees decisions as being made more in response to the organizational environment—they present themselves to you. He works with a strong set of personal values, closely aligned to the organization's because of the long tenure with the institution. He does not have an overly formalistic or normative decision-making process, although he will almost always frame issues from an organizational structure approach and will use organizational actors in their roles to assist in making decisions. The heavy influence of the culture—in this case, research academia—was noted as a constraining anchor.

He describes himself as being more of an intuitive decision-maker, basing decisions more on personal values and beliefs than on quantitative data (despite the financial rationale of restructuring). He doesn't operate with much of a written plan for approaching decisions; nor is there much reference to a plan to evaluate outcomes; This is in contrast to the fact that most of his decision-making energy is spent on developing implementation plans, identifying and collecting information needed for making the decision. The least amount of energy is spent on developing trial balloons or evaluating alternatives.

The Chancellor was reluctant to identify "decision points," choosing to see decisions more as successive events, and that a decision might not actually be called a decision until something is completed. He was relatively uncertain as to how others would view his decision-making process—and relatively unconcerned about that as well. He views his role as moving the institution toward its goals. Although he notes the presence of well defined organizational values, he is quick to add that this doesn't always mean that the institution is moving in the direction that best achieves these values.

Academic restructuring was used as an example of a decision area. The Chancellor saw this primarily as an issue of containing administrative costs. The commitment was made to engage the campus in a year long discussion about structural alternatives and then use the following year to implement an alternative organization structure. A series of open meetings were held, discussions with the chairs of the divisions and formal committees were initiated, and the dialogue seem to be proceeding positively. Just at this point, what appeared to be a consensus of the campus, disintegrated into clear faculty resistance. Faced with the situation, the Chancellor decided to "take the issue off the table, put in (his) back pocket and let it resurface again—the issues will still be there and some of them will have to be addressed anyway—issues may come up in different ways." Clearly his tactic was to adjust the timeline somewhat—but the goal still remains. "That happens all the time—ideas disintegrate—that's frustrating, especially when commitments are made out there. And things are going well."

The Chancellor's perception of the situation was that no one really got upset about the situation until they thought some action was actually going to be taken. This raises the question as to how decisions are viewed differently by individuals from different vantage points. While faculty members perceived that a decision had been made, the Chancellor perceived that the decision was still out in the future.

Finally, the Chancellor noted that he doesn't spend a lot of time on defining problems; he focuses more on solving problems because they usually "hit you in the face." He had some concerns initially with the notion of audibles—because he was unsure about whether you can actually name clear decision points. But as the discussion progressed, he commented on the value of the concept. Also, he was hesitant to embrace the image because of its potential competitive associations; he does not view his organization as being two teams—offense and defense. This may be a limitation of the metaphor.

Portrait Three: Police Chief. The Police Chief has been in his current position since January, 1996. He was promoted from within the department after serving more than fifteen years in line police work. As a decision-maker, the Chief depends very much on his own personal values and past practices; he relies on what has been successful for him in the past. At times, he is able to see that his own personal values are at odds with those of the department. He is heavily involved in trying to change the culture of the department. He would identify his decision-making strategy as one in which he hopes to cause the least disruption to people (although this seems to be at odds with how others in the department view him). He sees himself as a creative decision-maker.

By self report, he describes himself as more intuitive, tending toward taking the first alternative available, making decisions more himself, viewing decisions more as single events, and not having a written plan for approaching decisions. He makes decisions based on his personal and organizational values, and tends not to evaluate outcomes by reference to a plan. He thinks others would view him as sometimes consistent and sometimes inconsistent, informal, ad hoc, and intuitive.

As an example, we discussed the restructuring of the police department. The driving personal value was to get more officers out doing police work and less time in the department doing paperwork. The catalyst for this decision was a three year state grant providing money for more police officers or civilians. The Chief's strategy to restructure the department is to 1) transfer police officers from administrative positions out into the line and replace them with civilians at less expense, and 2) reconfigure the number of "ranked" positions by either reconstructing the management hierarchy or cutting out a level. This would be done by creating more lower level rank positions and fewer upper level spots. He views the department as being administratively top heavy.

The decision-making process can be seen as one which has had to be altered along the way. In addition to the officers, the Chief has to contend with a civilian Merit Commission and a police officer's union. The focal point was at a Fall, 1997, Merit Commission meeting when the Chief presented the grant proposal and as he says, he "was outnumbered 51-1." The process by which this decision will be implemented has occurred somewhat slower than initially expected. The discussions have been expanded to include the formation of an employee committee and the focus of discussions has been expanded to identify the department's long range objectives.

In retrospect, he might have started by looking at longer range objectives. He sees the changes being proposed as being at odds with past values in the department. The department has not been focused on performance. He also sees officers who do not want to take even simple instructions from civilians, thereby making the introduction of civilians into the department difficult.

His pattern of decision-making could be characterized as being more impulsive, lacking a consistent game plan, and probably willing to alter decision outcomes as much as adjusting tactics, particularly if opposition is strong. This should be viewed in relation to the strength of his personal convictions and his tenacity to hold to a position, if personally important to him. Although relatively unconcerned about the reactions of others, the Chief acknowledges that it might be useful to focus more time on anticipating what the objections to his approaches are or building ownership on the part of individuals in order to move things forward. Along with this, it should be noted that he tends to consult with people more informally, using key people he trusts as sounding boards, but perhaps bypassing some of the formal organizational structures. The penchant the Chief has for "making decisions" may be influenced by the quasi-military or hierarchical structure of the police organization.

Comparison of Organizational Leaders. Table 1, below, provides a summary of how these three organizational leaders might be characterized along six different dimensions. This table will show both some of the similarities and differences.

Table 1. ***Graphic Illustration of Leaders on Various Dimensions***

Dimension	*Plant Manager*	*Chancellor*	*Police Chief*
Image of Self	Intuitive, Teacher	Intuitive, Pragmatic	Intuitive, Decisive
View of Decisions	Successive Events	Successive Events	Single Events
Decision Addressed	Continual Quality Improvement	Academic Restructuring	Departmental Reorganization
Dominant Strategy	Incremental Behavioral Change	Balancing multiple priorities	Keep pushing toward my decisions
Cultural Change Desired	Increased Individual Accountability and Responsibility	Greater collaboration and Control of Administrative Costs	Greater Performance orientation and more "police work"
Focus of Efforts	Preparing the conditions for acceptance of decisions	Identifying and getting information needed; screening against the mission	Make the decision and let people react; will adapt as needed

Common Themes. Despite their individual differences, four common themes can be identified. First, there was a distinct lack of a formal decision-making model, a point that will be addressed more later. And in two of the cases, little reference back to a plan to evaluate decision outcomes. Second, to a certain degree, each one of the leaders had difficulty identifying specific decision points. In at least two cases, it was as if calling something a "decision" was delayed until the last possible moment. This is not done out of procrastination but may be a leadership skill which acknowledges the ongoing nature of organizational decisions. It may also be done to protect themselves in case a decision goes sour. Third, the role of personal values in organizational decision-making appears to be of great importance—and each organizational leader interviewed seemed to be relatively unconcerned about how their employees viewed them. Fourth, all were engaged with decisions requiring a change in the culture of the organization. But in the decision-making examples, no part of the process dealt explicitly with the decision to change the culture—it was regarded as background information and in most cases viewed as a constraint.

Relating the Data to the Hypotheses. What did we learn in terms of our hypotheses? First, do organizational leaders continually monitor organizational responses to change implementation procedures and make adaptations on the basis of these perceptions? It is clear that organizational leaders are not unaware of how their organizations are responding. On the other hand, the evidence suggests that this hypothesis needs to be altered somewhat. It was not clear that this is an issue to which these leaders attended. There is a realization that projects may get derailed, but the predominant approach to their decision-making is to assume progress until shown signs of clear and strong resistance. While they are attune to their environments, one does not sense a continual monitoring of the organization's response, nor a high level of concern about it.

Second, when adaptations are made, is the rationale for making changes communicated or made visible to organizational participants? It was hypothesized that they would not be. This is also difficult to determine because of the manner in which these leaders perceive decisions. There is little evidence to suggest that organizational leaders make the reasons for their "adaptations" transparent or visible to organizational participants. There are several possible explanations. Since there is often not a fixed decision-making strategy, there may be little distinction between normal progress and adaptations. Only in a routine situation would adaptations be clearly identified as adaptations. Also, organizational leaders may want to maximize progress toward their personal goals and values. To acknowledge that progress or the process has been adapted may detract from their sense of "leadership competence," even though adaptations are frequently made.

Third, it was hypothesized that when adaptations are made, these would generally be made with regard to change tactics and procedures rather than change outcomes. This hypothesis was clearly supported in two ways. First, all three leaders were focused on goal achievement. Second, in most cases when adaptations were made, they were viewed as a delay in the timetable rather than a change in the goal. There may be an exception here. If decisions are viewed more as discrete, single events (as opposed to smaller successive events), then a leader may be more prone to alter the change outcome itself.

Fourth, does the individual's personal approach to change have a greater influence on decision-making processes than the organization's industry characteristics? Here, the hypothesis must be revised. In each case studied, the current organizational cultures were viewed as a serious constraint on decision-making. The nature of the industry plays a role is shaping these cultural expectations, but it is likely that the *culture of each particular organization* is at least as great an influence as an individual's personal approach to change. There was no direct evidence either confirming or disconfirming any correlation between how leaders deal with change personally and how they deal with it organizationally.

Implications and Further Research

Conceptual Decision Making Models. Models of individual decision-making are evolving. Beach surveys traditional normative decision-making models and outlines a "naturalistic" decision-making model, one which he contends more closely represents what happens in actual decision-making (Beach, 1997, p. 166). The data collected here supports several of Beach's key contentions. First, we may overestimate the use of formal prescriptive or normative decision-making models in real life. When faced with decisions, there does not appear to be a conscious choice about applying a mental model of decision-making. It is also possible that this happens so frequently that it is an "automatic" response which has just not been brought to consciousness.

Second, the data confirms Beach's contention that we have underestimated the role of personal values in decision-making. All three organizational leaders began their decision-making processes with reference to their personal values. Of interest, while viewing their values as being closely aligned with their respective organizations, each could also distinguish between the two, realizing that these might diverge at points.

Third, Beach's model may underestimate external factors. The decision-maker's process itself is shaped by external factors such as changing customer requirements, controlling administrative costs, and the need to deploy personnel differently. Although a leader's personal values and projections are key, external events are the impetus for many decisions.

Finally, even in Beach's naturalistic model, which is more descriptive than normative, it still appears to be a more formal process than actually occurs in reality. Organizational leaders, at least in small to medium size organizations, do not appear to go through the type of compatibility sorting process that Beach has outlined. The model has much to commend itself, but may need continued refinement.

Future Questions. There are a number of questions which this research raises for further research and inquiry: 1) Under what circumstances would organizational leaders benefit from utilizing more formal decision-making models? 2) How do we measure the quality of decisions, and does that quality vary with the decision-making method? 3) Would the effectiveness of organizational leaders be enhanced if adaptations in decision-making processes were made more explicit and discussed more openly? 4) How do we assist organizational leaders to assess the strengths and liabilities of their personal decision-making processes? 5) Does the metaphor of an "audible" needed to be revised or explored further?

Summary

The process of "calling audibles" or "making adaptations" during decision-making processes is seldom articulated on the surface. In most cases, these key points are known in retrospect—or are communicated in very neutral terms. When decisions are made to alter change implementation processes, they are primarily directed at adapting tactics and procedures, not the change outcome itself. The metaphor of the "audible" might be useful to decision-makers because it signals continuity with an ongoing game plan—a priority for leaders. While strategies and plans may be formalized, methods for approaching decisions are more informal. Success in calling audibles may be a critical factor in a leader's ability to help change an organization's culture.

References

Beach, Lee Roy. (1997). The Psychology of Decision Making. Sage: Thousand Oaks.

Dunphy, Dexter, & Stace, Doug. (1993). The Strategic Management of Corporate Change. *Human Relations*. 46 (8), 905-920.

Kotter, John P. (1996). *Leading Change*. San Francisco: Jossey-Bass.

Marshak, Robert J. (1994). Managing the Metaphors of Change. *Organizational Dynamics*.
22 (1), 44-56.

Morgan, Gareth (1997) *Images of Organizations*, Thousand Oaks: Sage Publications.

Moustakas, Clark (1994) *Phenomenological Research Methods*, Thousand Oaks: Sage Publications

Nadler, David, & Tushman, Michael. (1990). Beyond the Charismatic Leader:

Stace, Robert. (1995) *The Art of Case Study Research*, Thousand Oaks: Sage Publications

Strebel, Paul. (1994) Choosing the Right Change Path. *California Management Review. 36 (4), 28-51.*

Tushman, Michael L. , & Anderson, P. (1997). *Managing Strategic Innovation and Change*. New York: Oxford University Press.

Van De Ven. Andrew. H. & Poole, Marshall S. (1995). Explaining Development and Change in Organizations. *Academy of Management Review*. 30 (3), 510—539.

A Case Study Using a Large Scale Interactive Event to Implement Organizational Change in a Nonprofit Government Organization

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Organizations regularly implement changes. Large Scale Interactive Events (LSIEs) are increasingly used to implement organizational change when large numbers of participants are involved. This case study of a nonprofit government organization explored the planning for the event, the event itself, and the followup activities through observation and extensive interviewing, identifying strengths and weaknesses of such LSIEs. Recommendations for improved implementation are made.

Organizations (for profit and nonprofit alike) have to contend with change which occurs because of the level of technology, globalization of the economy, and changes in demographics (Merriam & Caffarella, 1991; Nutt & Backoff, 1994). Organizations often seek help from organization development (OD) consultants for help in implementing and maintaining change. OD consultants are constantly looking for innovations to cope with change and to implement change efficiently and effectively. Recently, OD consultants have devised new methods of implementing changes which are aimed at shortening the time it takes to effect change by focusing on the entire system rather than on individuals or groups of individuals. As observed by Bunker and Alban (1992b):

> In organization development (OD) practice we have been impressed and excited by what appears to be a new type of social innovation occurring all around us. We are speaking of several different types of work with whole systems that is (sic.) emerging in a variety of forms. (p. 473)

One way of implementing change in the whole system is through the use of LSIEs (LSIEs). These events are attended by as many as 1,500 people (Sullivan, 1997), all meeting in one place for a two- to three-day period. In such an event, participation is extended to all possible stakeholders, such as employees, shareholders, customers, and suppliers.

Background of the Study

LSIEs, in which the whole system is targeted for the implementation of change, appear to have begun with the work of Emery and Trist in Britain in the late 1950s and early 1960s (Purser, Cabana, Emery, & Emery, 1997). They referred to their work as Search Conferences. Before then, OD interventions had targeted individuals or departments, and the implementation of change was gradual. The development of LSIEs was slow in the 1960s, but from the 1970s the growth in the use of LSIEs has been phenomenal (Bunker & Alban, 1992b). This change has been evidenced by the increasing number of OD consultants using LSIEs.

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Purposes of the Study

As with all organizations, nonprofit government organizations find themselves having to cope with rapid changes. These changes may result from new regulations, dwindling sources of funding, or political crisis. Menefee (1997) concluded that

> Over the next decade, these economic, political, social, and technological forces will have profound impact on size, structure, and function of the nonprofit human service industry. (p. 12)

The purposes of the study are to determine the strengths and weaknesses of an LSIE in planning and implementing change in a nonprofit government organization, to explore the experiences of the participants of an LSIE, to evaluate the LSIE as seen by the participants, and to establish what the participants think would make the LSIE more effective in implementing change.

Need for the Study

There has been a great deal of activity in using LSIEs in the public and private sectors (Nutt & Backoff, 1994; Purser, Cabana, Emery, & Emery, 1997; Sullivan, 1997). Bunker and Alban (1992b) alluded to OD practice being atheoretical today and called for interaction between theory and practice. Research should be conducted to address that imbalance where practice is not supported by theory. Writing on LSIEs to date has largely been by the OD consultants who are using the events to implement change. Their assertions on the success of the events need to be supported or rebuked by independent research. There is a need for this study to report purposely and as objectively as possible by third party researchers on the efficacy of LSIEs.

It is also worthwhile to understand the potential of LSIEs for nonprofit government organizations. While nonprofit government organizations operate under a different set of conditions from profit-oriented organizations, nonprofit government organizations are increasingly operating more like profit-oriented organizations.

Significance of the Study

Organizational change is very common as evidenced by the large number of OD consultants who devote their energies to the planning and implementation of change. Organizations are themselves systems, yet they are built on individuals--individual chief executive officer, individual manager, individual employee, individual shareholder, and so forth. Thus, it is important to study organizational change as a whole, while also exploring the experiences of individuals experiencing change in that organization.

Much of the writing on LSIEs originates from reports of what happens during the event. While this is important, there is no adequate report on the planning for the event, the feelings of participants about the event, the changes that follow the event, or what happens much later after the event. This study will explore the planning that took place before the event, the interactions during the event, and the personal feelings a few days after the event. A subsequent study will explore participant reactions six months after the event.

Specific Research Questions

The central question for this research was formulated around organizational change and how an LSIE would influence that change. In a meeting held during the planning stages of this research between the researchers and a group of OD consultants involved in LSIEs, the following specific research questions were identified:

a. What happens before, during, and after an LSIE?

b. What purposes would an LSIE have for a nonprofit government organization?

c. Are the purposes of an LSIE achieved?

d. What is it like for employees of a nonprofit government organization to participate in an LSIE?

e. What does an LSIE contribute to an overall change effort in a nonprofit government organization?

f. What role does the leadership of an organization play in an LSIE?

g. What variables impact the success of an LSIE in a nonprofit government organization?

Limitations of the Study

This case study involved participants from the same LSIE. Their experiences could well be very different from experiences in other LSIEs and in other organizations.

Literature Review

There has been a recent influx of LSIEs aimed at working with a whole organization to reduce the time it takes to institute change. Such interventions use various names: Search Conference, Future Search, Multisearch, Future Search Conference, Conference Model, Simu-Real, Open Space Technology, Appreciative Inquiry, Work Out, Fishbowl, Real Time Strategic Change, Large Scale Interactive Events (Brigham, 1996; Klein, 1992; Purser, Cabana, Emery & Emery, 1997; Sorensen, Gironda, Head & Larsen, 1996; Weisbord & Janoff, 1995). While there is variation in the primary strategy utilized, what is common is the involvement of large groups of people meeting in one place for a period of two or three days.

LSIEs are based on the principles of small groups (Dannemiller & Jacobs, 1992; Emery, 1992), though the number of people in the groups could be very large, ranging from as few as forty to over two thousand persons, all meeting in one place in short periods of time (two to three days). In fact, a group involving less than one hundred can hardly qualify as a LSIE.

A second characteristic is that LSIEs target the whole system as opposed to dealing with a single department or a group of persons (Bunker & Alban, 1992b). Therefore, each small group in a LSIE is usually made up of persons from different departments and levels. This is referred to as max-mix in the jargon of LSIEs (Sorenson, 1996).

Third, LSIEs are democratic (Emery, 1992; Sorenson, Gironda, Head, & Larsen, 1996). Each person is given an opportunity to air her or his opinions. It is important that democracy be practiced in order to increase the active participation of all participants. However, it is unlikely that the short time of the event will allow for a truly democratic atmosphere.

A fourth characteristic is increased commitment to change (Axelrod, 1992). If a person is a party to a decision, she or he is likely to be more committed to that decision.

Another stated characteristic is that LSIEs have greater speeds of implementing change (Axelrod, 1992). Because LSIEs involve all parties affected by the change, commitment is achieved quickly, thereby reducing the time it takes to implement changes.

A sixth characteristic is the development of working relationships that go beyond departments. As persons interact, they develop working relationships that would not have been possible without the LSIE (Bunker & Alban, 1992a).

Finally, LSIEs are interactive in nature (Dannemiller & Jacobs, 1992). These interventions are designed to allow interaction among persons of different departments and levels in an organization. Other characteristics include consensus, collaboration, and shared ownership of decisions.

There is, however, no agreement about the minimum or maximum number of participants (Dannemiller & Jacobs, 1992; Gilmore & Barnett, 1992; Purser, Cabana, Emery, & Emery, 1997; Sullivan, 1997). Some OD consultants utilizing this strategy suggest a minimum of 100 and others mention 300. There appears to be no claims as to maximum number of participants.

Purser, Cabana, Emery, and Emery (1997) have expressed their concerns about the number of participants:

> We suspect that these large group events might be useful for enhancing information sharing across boundaries, but we would be hard pressed to believe that the quality, depth of dialogue, and solidity of joint agreements around long-term purposes could be equivalent to a group of 35-40 participants which is the upper limit in a Search Conference. (p. 48)

While the authors are advocating for search conferences, it is easy to be sympathetic with their position. The large numbers of people and the compressed time for deliberations raise concerns for us as well. Might an LSIE turn out to be like a political rally rather than an effective tool for change? Emery (1992), commenting on LSIEs, wrote:

> All this is predicated on early and thorough planning and design that again involves understanding of the genotypical design principles. Until this understanding becomes widespread through cooperative work, management committees will continue to design camels instead of race horses. (p. 533)

Emery was referring to management committees which institute fast changes in organizations using LSIEs. Research around LSIEs is needed to confirm or allay the concerns raised about them.

Another concern related to LSIEs is the possibility of the occurrence of the "illusion of participation" dilemma (DeVogel, Sullivan, McLean, & Rothwell, 1995). An illusion of participation may be created when decisions are not actually made at the event but at another venue by different persons. It is possible that participants will not chart any change but may be used to "rubber stamp" decisions reached by a handful of individuals (say, top management). Bunker and Alban (1992a), for example, observed:

> The large group event is primarily an interactive planning event. When it comes time to make decisions, those with responsibility in the organization must take their decision-making roles again even if that simply means blessing what has already been done. (p. 585)

However, the decision-maker may decline to implement decisions reached in an LSIE.

In the development of Kenya's national language, Swahili, there is an unwritten policy of liberally accepting new words from different languages. A similar situation exists in the field of OD. As long as practicing OD consultants continue to develop different intervention strategies, researchers will have to study the interventions (LSIE in this case) to add theory to improve practice. Knowledge about LSIEs has the potential of enriching OD theory and practice.

Research Methodology

This study utilized phenomenological research. Van Manen (1990) stated that "phenomenology must describe what is given to us in immediate experience without being obstructed by preconceptions and theoretical notions" (p. 184). This research was designed to give accounts of persons who participated in an LSIE in preparation for organizational change. Streb (1984) identified three stages in phenomenological study: making judgments, asserting the judgment made, and thinking about empirical categories. This study developed a description of the experiences and reflections of the participants and leadership of an LSIE.

Research Design

The research was a case study of one nonprofit government organization headquartered in St. Paul, Minnesota. The study largely used participant observations of an LSIE, followed by interviews of participants and leadership soon after the event. A subsequent study will also interview participants and leadership six months after the event to solicit evaluations of the accomplishments about the LSIE and to describe the contributions the event made to the way changes were implemented in the organization. Observations were made of the planning meetings for the LSIE. An observation guide was developed for use during the event. The observations were used to write a description of the interactions during the event.

Interviews were also held during the month after the LSIE. These interviews captured the participants' perceptions of and feelings about the event. The participants will also be interviewed after a period of six months. The purpose of both sets of interviews is to solicit evaluations of the accomplishments of the LSIE. The participants were asked to describe the contributions the event is likely to make in the way changes will be implemented in the organization. The six-month interviews will determined the actual impact of the LSIE on the way in which changes were implemented.

Before the researchers became involved, an earlier meeting had been held between the Executive Team and the managers. This meeting made the decision to hold an LSIE for the entire organization. It also decided that the event would be planned by a representative group of persons from the entire organization. This group was referred to as the Design Team. The Design Team was made up of nine persons who volunteered to participate after receiving electronic mail from a member of the Executive Team. The members of the team were largely unknown to each other. Only one person was from the support staff, and only one person had attended the earlier meeting of the Executive Team. Two OD consultants were also on the Design Team. Neither of the researchers had any responsibility for nor any role in the activities, except for as non-compensated research role.

Observations were first made of a three-day planning meeting of the Design Team. Another observation was made of the staging day--a day before the actual LSIE. Staging the event was done by the two OD consultants, the Design Team, and the Support Team. The Support Team consisted of two office staff from the consultants' organization, support staff from the client organization, and volunteers who were learning how to conduct LSIEs. Finally, observations were made of the entire three-day LSIE. The event included 468 people from a nonprofit government organization with 534 employees and the OD consultants. Attendance at the event was "required," not voluntary.

One-hour interviews were held with 22 people within a month after the LSIE. For the interview part of the research, selection was made to include women, minorities, and employees at all levels of the organization. While an interview guide was developed, the interviews were largely unstructured, with the participants being allowed to make uninterrupted responses followed by probing questions for clarity or expansion. The researchers also reviewed the records made during the event.

Instrumentation and Validation The study was designed from an interpretive perspective. Its validity is built on agreement between the researchers and the participants on the themes emerging from the discussions. A summary of research outcomes was shared with the consultants and the participants from the nonprofit government organization for their feedback.

Data Analysis A report of all observations was first written. Then, all tape-recorded interviews were transcribed and hard copies made. A thematic analysis was made from the interviews and observations of the LSIE. Dominant themes were identified, summarized, fed back to participants, and then revised, as needed.

Observations

Observations are based on the meetings of the Design Team and the three-day LSIE.

Design Team The planning for the event was done by a nine-member Design Team and two OD consultants. The OD consultants explained the purpose of LSIEs as shortening the length of time it takes to implement change. The consultants explained that the Design Team will plan for the event and will perform some of the activities during the event.

The Design Team went through the activities that were to be done during the LSIE. One of the activities was to determine what was working for the organization and what was not working. The representative of the Executive Team provided information on what the Executive Team hoped to achieve during the event. The Executive Team is made up of the Commissioner, the deputy commissioner, three assistant commissioners, and three other persons.

The Design Team identified those activities that would be carried out during the event to enable the organization to change. The OD consultants present were careful not to provide solutions for the organization. The consultants served only as resource persons in that they only made suggestions and left the Design Team to struggle with what they wanted for the organization. The members also undertook to do specific tasks before and during the event.

LSIE The LSIE lasted three days with 468 persons in attendance for at least part of the time. At no time was there a table with fewer than six persons, with some tables having seven or eight. The members of the Design Team were present throughout the event period and took active roles in the event.

Free Interaction. Each day of the event consisted of free interaction of participants over continental breakfasts, coffee breaks, and lunches. The participants further interacted in their max-mix tables. The composition of these tables was such that each table had all categories of employees--management, supervisors, professional staff, and support staff.

Objectives of the Event. One member of the Design Team read the objectives of the LSIE. The objectives were:

1. To determine what is working and not working in the organization.
2. To understand and embrace the new agency's purpose, mission, and goals.
3. To identify the opportunity that exists for each individual's unique contribution to the purpose and goals of the organization.
4. To commit to a community culture focused on services to their customers.
5. To identify and take the first steps needed to implement fully their new culture.
6. To identify a method of measuring and communicating their results.

She pointed out that there are things beyond the control of the participants, for example, the vision and mission statement. In summary, the event was to create and define culture, build community(s) (internal and external), and identify solutions to ensure that the organization will accomplish its mission.

Speeches. There were short speeches throughout the three-day event. These included a "power speech" by the Commissioner of the agency, a State Senator, a panel of community stakeholders, the Design Team members, and the OD consultants. Most of the speeches were followed by reactions from the participants. Some speeches were followed by lengthy interaction through question and answer sessions and discussions at the max-mix tables. Each speech was geared towards the need to see the agency as one "whole" organization with a mission to serve community(s) rather than several "parts" of a disjointed organization.

Activities. The participants were involved in many activities during the three-day period. The activities included the identification of what was working and not working at the agency, writing culture statements, rewriting the culture statements, and drawing system-wide action plans. Another activity was for the participants to react to the speeches which were given and report on the table discussions. The participants also wrote personal commitment statements. From time to time, the participants were engaged in fun breaks--activities meant for fun only.

The Product. At the end of the third day, participants had written statements of their culture, systems-wide action plans, their commitment to the organization, and what they planned to change in the way they work. These were, however, very general statements about the organization; they could have fit many other organizations. The final version of the statements was sent to a follow-up committee for additional work. The committee was made up of volunteers.

Interviews

In the second phase of this study, 22 participants of the LSIE were interviewed. An interview was also held with one of the OD consultants, and another consultant gave written responses to the interview questions. The interviews were meant to document the experiences and feelings of the participants during the event and their expectations of how it will affect the operations of the organization. The interviews produced insights into what could not be observed or read in the records.

The interviews revealed that the participants were concerned with the slow pace of the follow-up activities, that the level of expectations was high, and that the research participants and the organization as a whole had not changed much as a result of the event. The participants were convinced that the Executive Team was genuine with its concern for change, but they felt that the life of the Executive Team was dependent on state politics. They also looked to the Executive Team to implement the changes. The high number of volunteers for follow-up activities showed the participants' desire to be involved in the change process. However, the slow pace of implementation kept the level of skepticism high even after the event.

The OD consultants and the client organization perceived the consultants' roles differently. The client organization did expect that the consultants would participate more in the follow-up activities and develop a consulting product (documentation and analysis). Another incongruency occurred around a specific activity during the event--the fun breaks. While the participants received them well, they caused problems for the consultants as they consumed a lot of valuable time without really moving the process forward. As a nonprofit government organization, there did not exist a full-fledged OD department and that delayed the data analysis and other follow-up activities. However, the organization had hired a person to coordinate the followup activities.

Conclusion

The LSIE prepared ground on which organizational change could be implemented. The use of an LSIE to implement organizational change in a nonprofit government organization created great expectations for change in the participants. The LSIE, to date, has resulted in minimal change in the way individuals and the organization operate. The event is indeed a beginning for change rather than an end in the implementation of organizational change.

OD consultants planning on using LSIEs should plan on spending more time on the implementation phase rather than assuming that change is achieved during the event. In a nonprofit government organization, it is likely that there will not be an internal OD department, and so an external OD consultant should plan on spending time to help in follow-up activities. Planning for follow-up activities is as important as planning for the LSIE itself. OD consultants should anticipate what problems nonprofit government organizations may encounter and coach the leaders accordingly.

References

Axelrod, D. (1992). Getting everyone involved: How one organization involved its employees, supervisors, and managers in redesigning the organization. *The Journal of Applied Behavioral Science, 28*(4), 499-509.

Brigham, S. E. (1996). Large-scale events: New ways of working across the organization. *Change, 28*(6), 28-37.

Bunker, B. B., & Alban, B. T. (1992a). Conclusion: What makes LSIEs effective? *The Journal of Applied Behavioral Science, 28*(4), 579-591.

Bunker, B. B., & Alban, B. T. (1992b). Editor's introduction: The LSIE--A new social innovation. *The Journal of Applied Behavioral Science, 28*(4), 473-479.

Dannemiller, K. D., & Jacobs, R. W. (1992). Changing the way organizations change: A revolution of common sense. *The Journal of Applied Behavioral Science, 28*(4), 480-497.

DeVogel, S. H., Sullivan, R., McLean, G. N., & Rothwell, W. J. (1995). Ethics in OD. In W. J. Rothwell, R. Sullivan, & G. N. McLean (Eds.). *Practicing organization development: A guide for consultants* (pp. 445-489). San Diego: Pfeiffer & Company.

Emery, M. (1992). Workplace Australia: Lessons for planning and design of multisearches. *The Journal of Applied Behavioral Science, 28*(4), 521-533.

Gilmore, T. N., & Barnett, C. (1992). Designing the social architecture of participation in large groups to effect organizational change. *The Journal of Applied Behavioral Science, 28*(4), 535-547.

Klein, D. C. (1992). Simu-Real: A simulation approach to organizational change. *The Journal of Applied Behavioral Science, 28*(4), 566-578.

Menefee, D. (1997). Strategic administration of nonprofit human service organizations: A model for executive success in turbulent times. *Administration in Social Work, 21*(2), 1-19.

Merriam, S. B., & Caffarella, R. S. (1991). *Learning in adulthood.* San Francisco: Jossey-Bass.

Nutt, P. C., & Backoff, R. W. (1994). Transforming public and third sector organizations facing difficult times. *Technological Forecasting and Social Change, 45*, 131-150.

Purser, R. E., Cabana, S., Emery, M., & Emery, F. (1997). Using search conferences for planning large-scale strategic change. *Organization Development Journal, 15*(1), 30-52.

Sorenson, P. F. (1996). An interview with the Sullivan's (sic.): Roland and Kristine. *Organization Development Journal, 14*(4), 4-17.

Sorensen, P. F., Gironda, L. A., Head, T. C., & Larsen, H. H. (1996). Global organization development: Lessons from Scandinavia. *Organization Development Journal, 14*(4), 46-52.

Streb, J. H. (1984). Thoughts on phenomenology, education, and art. *Studies in Art Education, 25*(3), 159-166.

Sullivan, K. (1997). Quickening transformation: Three efforts: Community, organization, and self. *Organization Development Journal, 15*(1), 53-61.

Weisbord, M. R., & Janoff, S. (1995). *Future search: A guide to finding common ground in organizations & communities.* San Francisco: Berrett-Koehler Publishers.

van Manen, M. (1990). *Researching lived experience: Human science for an action sensitive pedagogy.* London, Canada: The University of Western Ontario.

Organizational Memory and Scripts: Sources of Resistance to Change or Sources of Lessons from the Past?

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Based on a qualitative study that elicited and mapped the dominant mental models and sensemaking patterns of organization members during a reengineering project, this paper explores the powerful role played by organizational memory and collective-level scripts in guiding the thoughts and actions of organization members. Implications for planned change interventions are discussed.

This paper is based on a year-long case study of a major reengineering project in a civilian federal agency, referred to here as DAA. The purpose of the DAA study was first, to describe the collective-level schemas (shared mental models) and collective-level sensemaking patterns that emerged in a planned change intervention. Second, the study identified those activities related to the change that most influenced these cognitive phenomena.

Schemas are thought to play an important role in organizational change because they embody the assumptions and expectations of organization members and have an observable impact on how organization members think and behave (Bartunek, 1984). Also referred to as mental models (Senge, 1990) or knowledge structures (Walsh, 1995), collective-level schemas are representations of an organization's knowledge of some domain of interest. Cognitive anthropologists see complex and intricate patterns of schemas as the basic building blocks of cultural groups (D'Andrade, 1992). *Sensemaking* refers to the processes organization members use to construct meaningful explanations for their experiences; it includes the interpretation of incoming stimuli and the creation and modification of schemas that represent the environment (Weick, 1995).

Schema change has been associated with individual development (Piaget, 1985), organization-level learning (Kim, 1993; Schwandt, 1995; Senge, 1990), and radical or second-order organizational change (Levy, 1986). Because reengineering is, at present, a popular methodology for planning and implementing radical change in organizations, it provides a useful context for a study of schemas and sensemaking patterns elicited during organizational change.

Previous sociocognitive studies during change initiatives (e.g., Bartunek, 1984; Gioia & Chittipeddi, 1991) focused primarily on the role of leaders as sources and legitimizers of alternative schemas. In contrast, the DAA study focused on the schemas and sensemaking activities of the *work group,* the people in the organization who were outside the formal decisionmaking group. In most change initiatives, work group members have no formal role in conceiving the change but are critical to the successful implementation of plans conceived by the *design group* (in this case, the reengineering team and decisionmakers). Indeed, it has been suggested by scholars and practitioners alike that the enactment of organizational change depends largely on changes in the cognitive structures and processes of work group members. Note, for example, the following explanation for the frequency of reengineering project failures:

> It isn't especially arduous to come up with breakthrough ideas... [The real problem] is...getting people to let go of their old ways and embrace new ones... When a process changes,... more than jobs and skill requirements change. People's styles -- the way in which they think and behave -- and their attitudes -- what they believe is important about their work -- must also be realigned. (Hammer & Stanton, 1995, p. 17)

This paper explores what most influences how work group members "think and behave" in the phase of the change process Kurt Lewin called "unfreezing" (Schein, 1987). It thus contributes to our understanding of what occurs when an organization readies itself for radical change. It describes the methods used in the DAA study to identify collective-level schemas, the origins, content, development, and function of those schemas, and how new stimuli influenced ongoing sensemaking patterns in the work group. It concludes with a discussion of the implications of these findings for planned change interventions.

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Methods

The primary source of data on collective-level schemas and sensemaking was a series of focus group interviews. Focus groups allowed me to collect data from a larger number of work group members than would have been feasible otherwise and provided a setting that could generate data and ideas that might never be uncovered using methods that collect individual-level data (Stewart & Shamdasani, 1990). Focus group interviews are well-suited to exploring collective-level cognitive phenomena; they provide a setting where "instances evoked by one member trigger memories in another member's mind -- and the integration into a single judgment is performed by the group" (Schneider and Angelmar, 1993, p. 360).

Following a structured methodology developed by Billson (1996), I constructed a blueprint for the focus group phase of the study that guided my purposeful selection of participants. Each group was homogeneous on the key variable of *degree of direct experience with the project,* an interesting and somewhat unexpected variable that had emerged from observations during my first eight months in the field. The groups were deliberately mixed along less critical variables, like hierarchical level and unit affiliation. I used the organization's internal e-mail system to issue invitations and collect responses. Of the 89 work group members who were invited to focus groups, 57 took part (64%). Representation in the focus groups mapped closely to the actual population of the agency on unit affiliation and gender dimensions.

The focus group protocol was designed to elicit work group schemas in the following way. First, work group members were primed to think about reorganizing by briefly describing what they recalled from past reorganizing experiences. I then invited them to compare and contrast the past and present experiences; this produced a meaningful description of their current experiences in reengineering. This approach is based on the idea that the content of schemas can be found in the summaries of past experience, the "cues and labels that snare specifics of present experience, and in the ways these two settings are connected" (Weick, 1995, p. 111). It is grounded in a basic tenet of personal construct theory, which holds that "man makes sense of his world through contrast and similarity" (Kelly, 1955, p. 3).

I conducted eight two-hour focus group interviews over a three-week period in July 1996, two months after the final report of the reengineering committee was issued, and before decisions on implementation had been made. I audiotaped the focus group interviews and transcribed verbatim all of the tapes myself. This allowed me to "revisit" each focus group when I had no group facilitation responsibilities and could give the content of the conversations my undivided attention. It also allowed me to document the emotional tone of the discussions.

Data Analysis and Validation Analysis of verbatim transcripts revealed not only the story of the reengineering project but also stories of two past reorganizing events that were used in every focus group to draw comparisons with the present. The first stage of analysis, therefore, required that I reconstruct these three stories -- two past and one present -- retaining as much of the participants' language as possible. Next, the organizational stories were analyzed as text, searching for embedded actions, descriptive data about those actions, and linkages that revealed the sequence of the actions. This produced an outline of the work group's shared knowledge of these reorganizations that distilled and sequenced the actions and outcomes associated with each event. These distillations of the stories are known as *scripts,* which are schemas devoted to the retention of context-specific knowledge of events (Abelson, 1981; Gioia, 1986; Gioia & Poole, 1984). The last phase of analysis compared the scripts from these three events to discover how work group schemas about reorganizing developed over time. Also, sensemaking patterns and the effects of new stimuli were identified.

About six months after the eight focus groups met, I invited one participant from each of the eight focus groups to a ninth focus group interview. The purpose of this interview was to present the initial results of my analysis and ask participants to discuss, debate, and validate my findings. Their suggestions were incorporated into the final report of the study.

Results of Analysis

In all eight focus groups, participants told stories of the same two events that had occurred years earlier when asked to describe their impressions of reorganizing. While the memories were often vivid and detailed, they were not exact records of the actual events. Instead, some information from these experiences was retained and other information was left out, producing a simplified version of the experience -- a script -- that could be stored and retrieved for later use. It is this distilled collective-level cognitive structure that organized and facilitated retrieval of memories. These findings are consistent with research showing the role of schemas in human memory systems (Bartlett, 1932) and the role of communication and storytelling in reconstructing, transmitting, enhancing, and changing memories and scripts (Martin, 1982; Schacter, 1996).

Past Reorganizations – 1981 and 1991 The first major reorganization in the agency's history occurred in 1981. Known as *"the Reagan RIF,"* it produced a 40% reduction-in-force at DAA. *"I was involved in the 1981 RIF. But whether you were involved or not, it created very bad feelings. And it lingers fifteen years later. That's how strong it was." "That is certainly true. This place was like a morgue for [the following] five years. People did not smile. There was slow step. You'd go to meetings and they dragged. It was depressing."* In other groups, participants observed that *"People are still carrying the psychic, emotional, and financial impacts of the 1981 RIF with them."* Focus group participants not working at DAA in 1981 also knew about the RIF. *"Ever since I have been here, people have talked about it."*

The strongest memory of the 1981 RIF was its secrecy. *"Management played that RIF very close to the vest."* Whole classes of positions were targeted for cuts, which meant that people in some job categories were especially vulnerable. *"A great deal of time was spent by people trying to figure out what was going to happen -- where they might end up in this process."* According to the story, top managers running the RIF began changing people's job descriptions behind the scenes in order to protect "*their buddies*" from impending cuts. Work group members condemned this practice as blatant favoritism and viewed the secrecy as a cover for decisionmakers who were manipulating the system.

The second major reorganization occurred in 1991. Its purpose was to create a new business unit that would support a new policy initiative by centralizing previously decentralized functions. In this case, no one lost his/her job but about a fourth of the agency's employees were moved to the new unit. Although the purposes and outcomes of the 1981 and 1991 reorganizations seemed quite different to me (downsizing vs. centralization; job losses vs. staff reassignments), the similarities in the memories and emotions recalled were striking. For example, the 1991 reorganization was described as *"wrenching... because the information about what was going to happen was held very tightly. I knew who I would be working for a day before I was assigned to that organization."* Like 1981, senior managers made all the decisions "*behind closed doors.*" Employees whose functions were "*targeted*" for the new unit "*felt they had no control over their life and no value either.*" Being sent to the new unit was compared to "*being sent to Siberia*"..."*like being ripped out of your home.*" Anxiety, secrecy, top-down decisionmaking, the practice of targeting some and protecting others were strong themes in both the 1981 and 1991 stories. In fact, the only difference noted between the two reorganizations was that the secret planning period was significantly shorter in 1991 than in 1981.

Present Reorganizing Efforts – The 1996 Reengineering Project When asked to compare the current reengineering project to past reorganizations, most focus groups saw reengineering as far more similar than different. The following examples of comparisons drawn between the past and present illustrate this pattern.

Secrecy vs. openness. The first difference noted in every focus group between reengineering and past reorganizing efforts was the openness of the reengineering project. This was attributed to the greatly-increased flow of information on the project. "*It's unarguably true that [the reengineering team] got more information out in the decisionmaking process. The [electronic] bulletin boards, the feedback loops -- all of that was clearly positive." "It's different because special efforts are made by [the reengineering team] to brief people, to inform people about what's happening.*" Although this dramatic and purposeful change in how information flow was handled drew almost uniform praise, almost half the comments about communication made in focus groups were about information overload. *"Not only is there more information, but [now] you cannot avoid the information. [laughing] People feel like they know more than they can handle sometimes. They can't absorb all of it."* Work group members complained that it was too time-consuming to keep up and too difficult to identify what was important. *"I didn't even read the [final report]. It was just too long... It could have in it that I'm going to lose my job next week* *and I would not know!" "It's almost as if they are trying to bury you in so much paper [that] they know you won't read it."*

In short, although the information blackout that characterized previous reorganizing efforts was replaced by a flood of information, most work group members still felt very much in the dark about what was really happening. Only two focus groups (consisting of work group members who had served as occasional guest panelists on the reengineering team) understood the project well enough to find the information available helpful and to perceive real differences between reengineering and past change efforts.

Top-down vs. participative decisionmaking. One obvious difference was that the reengineering project was the first major reorganizing effort in DAA history to use a team drawn from across the middle girth of the organization to develop recommendations for the change. Team members assumed responsibility for keeping their constituents in the work group informed throughout the planning phase using the electronic bulletin board, staff meetings, informal brown bag lunches, and even one-on-one discussions. In these forums, work group members could express their views of the reengineering proposals as they were developing, an unprecedented change from the past.

While these opportunities to comment helped the project earn its reputation for openness, they had little effect on work group perceptions about how decisions were being made. *"One thing I've seen that is characteristic of the past is that we have gone back to the same small group of people making all the decisions."* In six of the eight focus groups, participants agreed that reorganizing decisions were not emerging from reengineering, but were predetermined by a small group of decisionmakers based on what one participant called *"a master plan." "The decisions have either been made or are going to be made by people who, from the beginning, were going to make the decisions."*

The reengineering team's efforts to encourage work group participation were often labeled *"a facade." "Initially, I thought they were doing a good job of coming back and giving us summaries and they wanted a reaction from us. But, it became obvious later that we were just a sounding board. They just wanted to get a feel for how people would respond to the way they were going and indeed were more concerned with pushing their own ideas."* Participants found that comments from the work group that did not go *"along with the agenda"* were largely ignored, which produced a perception that dissenting opinions were unwelcome. Over time, this discouraged participation. *"About halfway through the process, I felt that it didn't really matter what I did or said. My opinions were going to be overridden if the [reengineering team] didn't agree with me...That's where I came out."*

Targeting some and protecting others. There were several decisions and events that occurred during reengineering that work group members interpreted as a target/protect routine, a prominent action pattern in the 1981 and 1991 stories. Target/protect routines in past reorganizations determined who would stay and who would go; descriptions of these activities were often highly emotional. Actions during reengineering that were interpreted as similar to the target/protect routine produced similarly emotional responses. One example was the "project scope" decision, which determined which organizational functions would be reengineered and which would be excluded from the project. At first, work group members whose functions were out of scope seemed relieved to be protected from the likely disruption of reengineering. But several months later, when the normal budget review process produced an unusual cut in an out-of-scope function, people affected became worried that the project scope decision was a thinly-veiled message about what was important to the agency and what was expendable. They started to *"feel truly left out," "not part of DAA anymore."* Many people, including managers, expressed concern that *"out-of-scope functions are being set up to be cut off."*

Comparative Analysis of the Data The 1981 and 1991 reorganizations had the same sequence of actions, the same players, the same plot line, the same dire outcomes (people being moved where they did not want to be against their will) and similar emotional intensity. When the 1996 script was compared to the earlier scripts, striking similarities among all three emerged, suggesting the strong influence of memories of earlier reorganizations on work group thinking during reengineering. However, some interesting differences emerged between the sensemaking patterns of focus group participants who had some firsthand experience on the reengineering project and the sensemaking patterns of focus group participants who had learned what they knew about reengineering only through what they had been told. These differences suggested that direct exposure to and involvement in reengineering was more likely to generate new sensemaking patterns than communication alone.

Conclusions

DAA work group members share a well-anchored script about reorganizing derived from and reinforced by past reorganizing events. *Simply put, this script dominated work group sensemaking about change during the reengineering project.* The 1981 RIF probably became the prototype for reorganizing at DAA. In later reorganizations, when new situations were perceived as sharing some common elements with the 1981 experience, a comparison-to-prototype process cued the use of the 1981 script as a basis for responding to the current situation. This use of the 1981 script to make sense of and guide behavior in similar but not identical situations is typical of how prototypes are used to make inferences (Fiske & Taylor, 1991).

Script-Driven Information Processing The reorganizing script served as a lens through which organization members viewed their experiences during reengineering, functioning as a kind of template of expected actions, highlighting where current experiences fit or did not fit. When an experience in the present fit the script, it was rendered sensible and the relevant script elements were reinforced. Piaget (1985) refers to this cognitive process as *assimilation*, an efficient form of information processing that produces little if any cognitive change. Such script-driven information processing seemed to help employees cope with a confusing, information-rich, and uncertain environment. It allowed them to create plausible interpretations of events and make rapid inferences about their likely outcomes. Unfortunately, script-driven processing also has been shown to support confirmation bias (the tendency to see only what you expect to see), which can easily produce perceptual errors (Fiske & Taylor, 1991). For example, the conclusion that efforts to involve work group members were mere pretense and the conclusion that the project scope decision revealed what was going to be targeted for cuts were both script-driven interpretations of ambiguous or novel situations during reengineering. These script-based interpretations, while questionable from my perspective, provided for work group members a plausible account of what was happening, which reduced their anxiety. Unfortunately, these accounts also may have discouraged a search for more satisfactory or meaningful explanations.

The Role of Emotions. The intense emotions associated with reorganizing experiences at DAA, both in the past and present, probably encouraged the script-driven information processing found in this study. Research on the relationship between stress and memory has shown that adrenaline released in the bloodstream during stressful situations enhances long-term memory retention. Researchers hypothesize that intense emotions and the chemicals they release in the blood signal that the triggering events are important and worth remembering (Singer, Chedd, & Angier, 1997). DAA's past reorganizations were emotional and anxiety-producing events, signaling their importance and enhancing retention of corresponding memories.

Heightened emotional states in the present also may have encouraged the script-driven processing found in the study. Research on autonomic arousal in high-pressure/crisis situations shows that experienced stress can suppress recent learning and trigger regression to first-learned behaviors (Weick, 1990, 1993). DAA employees were under great stress during the fieldwork for this study due to anticipated RIFs, a threatened government shut-down, and a general sense of anxiety about the agency's future. These circumstances may have limited their ability to use more recent learning and encouraged them to rely more on their earliest-learned script.

Challenging and Changing the Script The DAA case offers only one example of a real revision of the reorganizing script, what Piaget (1985) refers to as *accommodation* of the schema. This amendment of the reorganizing script was triggered by the unprecedented and dramatic change in how information was disseminated (from complete secrecy to openness). More subtle differences between were the past and present were assimilated into the old script, but this new stimulus triggered a cognitive change primarily because work group members *could not help noticing it.* (Even though information overload generated negative comments, it helped keep the attention of work group members focused on this difference.) Also, information dissemination really mattered to work group members. Being kept in the dark was one of the strongest negative

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memories of past reorganizations. The openness of reengineering, despite its problems with information overload, signaled to work group members that those in charge of reengineering understood the lessons of the past and were deliberately doing things differently this time.

However, developing new elements in the script that accommodate this novel stimulus was a demanding sensemaking task -- far more difficult than matching and explaining more familiar experiences using the old script. It demanded not only that work group members let go of their existing assumptions about information flow during change but also required that they develop a collective understanding of these new experiences, including their causes and expected outcomes. Development of new elements in the script, or *accommodation* of the script, was greatly facilitated by firsthand experience with the project. Communicating about reengineering, while necessary, had little effect on work group members' cognitive processes (except to reinforce the old script).

The influence of direct experience on cognitive processes could be seen in the differences in the sensemaking patterns across the focus groups. Focus group participants who had the greatest amount of direct experience with the project showed little of the dominant script-driven sensemaking pattern. These were work group members who served as guest panelists on the reengineering team on one or more occasions or who observed some of the planning sessions firsthand -- people who had seen for themselves how things could be different. One participant called it *"entering a different reality."* Experience was a richer source of data than communications alone; it provided both a strong disconfirmation of the old script and the necessary raw material for development of new script elements. Work group members' direct involvement in the project, even when it was limited to only a few days' work, seemed to produce a more better understanding of the project and its proposals, a finding consistent with a recent study on the effects of participation on cognitive complexity and assessment of change (Bartunek, Davidson, Greenberg, & Humphries, 1996).

Implications for Planned Change Interventions

The DAA study showed that scripts, invisible cognitive structures created through sensemaking about events in the past, have a good deal more to do with how people think and behave during change than anything else *and* that work group members are largely unaware of their powerful effects. The study also showed that reorganizing scripts can be surfaced, mapped, and examined by work group members with the help of a facilitator and suggests what insights can be gained from such an endeavor.

Reorganizing scripts are important sources of intelligence for those involved in planned change interventions because they reveal what organization members noticed and judged as important in the past, providing a clue to what really matters in the present. They provide a window into people's expectations, assumptions, biases, emotions, and knowledge about change. Viewed in this way, they can be seen as the source of important lessons for work group members and change agents who must plan and implement change.

From the work group's perspective, the value of the script may lie in the learning that can result from telling the stories and mapping the mental models that dominate the work group's thinking. Surfacing and mapping scripts makes unconscious patterns of thinking accessible to examination and challenge. This is one of the explicit objectives of various techniques that have been developed to facilitate organizational learning (Senge, 1990). From the change agent's perspective, the greatest value of the script may be its potential to describe in a meaningful way "where the client is." Scripts are especially useful images of an organization because all the unimportant details have been left out. They provide is a kind of historical map that directs one's attention to the most important and most dangerous parts of the landscape.

Despite the powerful cognitive effects of scripts and despite espoused values about "meeting clients where they are," few planned change interventions begin with a systematic inquiry into the organization's memories of past reorganizations. Perhaps our distinctively-American focus on creating a new future suppresses our interest in learning the lessons of the past. Perhaps probing into an organization's past seems too risky because it may open old wounds. This is a risk that must be taken, I submit, because to remain in the dark about the legacy of past reorganizing and fail to take its effects into account in planning a change intervention presents an even greater risk.

The Cognitive Dos and Don'ts *Don't* tell organization members (either explicitly or implicitly) to leave their collective past behind; this does little to help them actually do it and it may not even be possible or desirable. It merely sends a message that their past experiences are undiscussable, which may bury useful lessons. Scripts are most believable precisely because they are based on real-life experiences, a more reliable and powerful source of learning than anything change agents say. Actions do indeed speak louder than words. Because they are distillations of past actions and sensemaking about those actions, they have the privileged status of time-tested guides for behavior. They may go underground but they will not go away.

Therefore, if changing the way people think and behave during change is critical to the organization's success, *do* provide direct, preferably intense, experiences that will disconfirm the assumptions and patterns of the script. This study found that *only* such direct, fully-engaged, rich-with-stimuli experiences were powerful enough to write over the scripts that were created from and reinforced by past experiences. It is unlikely that we can erase past change experiences but it looks like we *can* record over them with new, equally powerful, positive (one hopes) change experiences. I view this as the cognitive microprocess that underpins successful participative change strategies.

Finally, *do* your best to reduce anxiety during the change. (Discovering what created the most anxiety in the past and, if possible, doing the opposite might be a good place to start.) People experiencing heightened levels of anxiety (a state of mind commonly reported during a radical organizational change) are less able to think complexly, integrate new information effectively, and use more recent learning. This is a considerable problem for organizations experiencing change because complex thinking, new ideas, and an ability to see one's experiences, oneself, and one's organization in new and different ways are exactly what is needed throughout the organization to bring about successful change. Thus, deliberate efforts to reduce anxiety (by acknowledging and avoiding the past mistakes that are so visible in reorganizing scripts) are not mere acts of kindness; they may be essential to the work group's enactment of the change.

References

Abelson, R. P. (1981). Psychological status of the script concept. American Psychologist, 36(7), 715-729.

Bartlett, F. C. (1932). Remembering. London: Cambridge University Press.

Bartunek, J. M. (1984). Changing interpretive schemes and organizational restructuring: The example of a religious order. Administrative Science Quarterly, 29(3), 355-372.

Bartunek, J. M., Davidson, B., Greenberg, D. N., & Humphries, M. (1996, August). Participation, complexity of understanding, and the assessment of organizational change. Paper presented at the Annual Meeting of the Academy of Management, Cincinnati, OH.

Billson, J. M. (1996). Focus groups for social and market research: A training manual. Alexandria, VA: Group Dimensions Research.

D'Andrade, R. G. (1995). The development of cognitive anthropology. Cambridge University Press.

Fiske, S. T., & Taylor, S. E. (1991). Social cognition. 2nd ed. New York: McGraw-Hill.

Gioia, D. A. (1986). Symbols, scripts, and sensemaking: Creating meaning in the organizational experience. In H. P. Sims, Jr., & D. A. Gioia (Eds.), The thinking organization (pp. 49-74). San Francisco: Jossey-Bass.

Gioia, D. A., & Chittipeddi, K. (1991). Sensemaking and sensegiving in strategic change initiation. Strategic Management Journal, 12(6), 433-448.

Gioia, D. A., & Poole, P. P. (1984). Scripts in organizational behavior. Academy of Management Review, 9(3), 449-459.

Hammer, M., & Stanton, S. A. (1995). The reengineering revolution: A handbook. New York: HarperBusiness.

Kelly, G. A. (1955). The psychology of personal constructs, Vols. 1 and 2. New York: Norton.

Kim, D. H. (1993). The link between individual and organizational learning. Sloan Management Review, 35(1), 37-50.

Levy, A. (1986). Second-order planned change: Definition and conceptualization. Organization Dynamics, 15(1), 5-20.

LeCompte, M. D., Preissle, J., & Tesch, R. (1993). Ethnography and qualitative design in organizational research. 2nd ed. San Diego: Academic Press.

Martin, J. (1982). Stories and scripts in organizational settings. In A. H. Hastoff & A. M. Isen (Eds.), Cognitive social psychology (pp. 255-305). New York: Elsevier/North Holland.

Piaget, J. (1985). The equilibration of cognitive structures: The central problem of intellectual development. (T. Brown & K. J. Thampy, Trans.) Chicago: The University of Chicago Press. (Original work published 1975)

Schacter, D. L. (1996). Searching for memory: The brain, the mind, and the past. New York: BasicBooks.

Schein, E. H. (1987). Process consultation. Reading, MA: Addison-Wesley.

Schneider, S. C., & Angelmar, R. (1993). Cognition in organizational analysis: Who's minding the store? Organization Studies, 14(3), 347-374.

Schwandt, D. R. (1995). Learning as an organization: A journey into chaos. In S. Chawla & J. Renesch (Eds.) Learning organizations: Developing cultures for tomorrow's workplace (pp. 365-379). Portland, OR: Productivity Press.

Senge, P. M. (1990). The fifth discipline: The art and practice of the learning organization. New York: Doubleday.

Singer, J., Chedd, G., & Angier, J. (Writers, Producers, & Directors). (1997). Pieces of Mind. Scientific American Frontiers, Show #703. [Video].

Stewart, D. W., & Shamdasani, P. N. (1990). Focus groups: Theory and practice. Newbury Park, CA: Sage.

Walsh, J. A. (1995). Managerial and organizational cognition: Notes from a trip down memory lane. Organization Science, 6(3), 280-321.

Weick, K. E. (1990). The vulnerable system: An analysis of the Tenerife air disaster. Journal of Management, 16(3), 571-593.

Weick, K. E. (1993). The collapse of sensemaking in organizations: The Mann-Gulch disaster. Administrative Science Quarterly, 38(4), 628-652.

Weick, K. E. (1995). Sensemaking in organizations. Thousand Oaks, CA: Sage.

Implementing High Performance Work Systems: Planned Change or an Emergent Learning Process?

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This paper reports the results of research on the implementation of high performance work systems. The study assessed which of two competing theories of change—a planned change model or an emergent learning approach—best explained the events and processes of change described by practitioners and consultants involved in successful change efforts designed to create high performance work systems. An emergent learning approach a better job of explaining the events and processes of change. But as practitioners and consultants moved to generalize from their experiences, they tended to extract and share lessons learned in a way that was more consistent with a planned change model.

Research and practice suggest that the processes of change that create effective organizations are as important as the principles and practices themselves. Until the 1980s, Lewin's (1951) three-step model provided the foundation for most planned organizational change. Since then, the focus of much theory and practice has shifted to more comprehensive models of change.

Over the past decade, organizational transformation has emerged as a distinct form of organizational change (Kilman, Covin, et al., 1990; Porras & Silvers, 1991). Organizational transformation is aimed at the planned change of both organizational vision and work settings, to create cognitive and behavioral change that will help an organization or system better fit or shape future environments. Compared with traditional OD models of planned change, organizational transformation aims for broader and deeper change, over a longer time horizon. Organizational transformation efforts typically aim to redesign work processes, organization and work structures, and a variety of supporting systems including human resource, information, and management systems. The variables targeted by organizational transformations approaches—organizational vision and mission, leadership, culture, strategy—affect a deeper level in the organization than those traditionally targeted for change by organization development. Often, organizational transformation efforts seek to change the mental models that underlie organizational structures and processes. An example is the paradigm shift from "production-driven" to "customer-responsive" which alters existing behaviors, creates new behaviors, and gives individual employees a totally new way of viewing their work. The large-scale and complex changes that many organizations are now undertaking typically entail multiple transitions, that last from three to seven years, and uncertain future states.

To date, there have been few systematic empirical studies of transformational change (cf. Beer, Eisenstat & Spector, 1990). The existing empirical literature consists primarily of single case studies of large-scale change and systematic studies of "small change". Most of our knowledge concerning large-scale organizational change thus comes from practice, provided in accounts and prescriptions written by academics and consultants who have been involved in large-scale change projects.

Approaches to transformational change reflected in that literature fall along a continuum with a traditional OD emphasis on "planned change" at one end (Beckhard & Pritchard, 1992) and an emphasis on "emergent learning processes" (Watkins & Marsick, 1996) at the other. Most planned change models employ a diagnostic framework, which includes a process for assessing the current state of the organization and its capabilities, for determining the desired future state, the changes in policy and practices required to reach it, and an action strategy for closing the gap. Such an approach typically assumes that leaders have a clear vision of what the organization should look like at some future state or date. The change process assumes that goals have been set and aligned, and results are emphasized in monitoring and assessing change.

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In contrast, an emergent learning model employs an action framework, in which values are clarified and a powerful, but emerging, vision is relied upon to guide change. A driving force for change is identified that is consistent with the vision, and the implementation of change depends on feedback and continual readjustment There is an expectation that goals will evolve, and change is deliberately implemented in a learning mode, emphasizing both the process of improvement and results in monitoring and assessing change. Whereas most planned change models enumerate a set of logical steps to be followed in implementing change, often with a preferred order or sequence, an emergent learning model anticipates a messy trial and error process, that can begin at many different points, and is iterative at every stage.

High Performance Work Systems

High Performance Work System (HPWS) is a term that has appeared with increasing frequency in discussions about the changing nature of work, and about organizational change and restructuring. To many, a High Performance Work System represents a new vision of an effective workplace that has emerged from the experiences of best practice companies and plants. Although there is no single agreed-upon definition of a high performance work system, nor consensus about a fixed set of components or practices, there is considerable agreement about a core set of ideas or principles underlying HPWS. These include:

- the philosophy that competitive advantage can be achieved through the strategic use of people
- the principle that work structures and processes are organized to maximize customer responsiveness and organizational learning
    - work is typically organized around customer-focused processes
    - structure and systems are organized to facilitate focus, accountability, and responsiveness
- human resource policies and practices—from selection and training, to compensation and career development—that seek to build employees' motivation, skill, and flexibility, and to align individual interests with those of the organization
- new approaches to leading and managing that are consistent with these philosophies, ways of organizing work, policies and practices

The concept of HPWS implies a systems approach to organizational design and change. Alignment is a key. Business strategy is aligned with the demands of the environment. Goals are aligned with the business strategy, and aligned at different levels, for different units and processes. All internal systems—structures, subsystems, policies, and practices—are aligned with the organization's goals and with each other. The implementation of HPWS involves a systemic approach to organizational change that ensures the effective alignment and integration of work design, people, process, information, and technology. Much of the literature on high performance work systems—with its emphasis on setting and aligning goals, designing or redesigning the organization's structures and processes, and developing and following detailed implementation plans– seems to favor a planned change model.

This study sought to assess which of the two competing approaches did a better of job of accounting for the events and processes of change described by practitioners and consultants involved in successful transformational change efforts designed to create high performance work systems.

Research Question

Which of two competing theories of change—a planned change model or an emergent learning process approach—best explains the events and processes of change described by practitioners and consultants involved in successful transformational change efforts designed to build high performance work systems?

Methodology

To answer this question, the study analyzed data on the implementation of high performance work systems that were collected during 1995-96. The data included in-depth interviews with practitioners and consultants as well as groupware output from a workshop which many of them attended in January 1996 to share their experiences with implementing high performance work systems (Gephart & Van Buren, 1996).

In-depth interviews and focus groups were conducted with managers in organizational units of three Fortune 100 companies that were identified by corporate staff as exemplary high performance work systems. Telephone interviews were conducted with six corporate staff, who in their roles as internal consultants in five Fortune 100 companies, assisted with planning and managing change to implement high performance work systems in plants and business units within their companies. Telephone interviews were also conducted with seven external consultants who had assisted many, diverse companies in their attempts to implement transformational change to create high performance work systems.

All of the managers and consultants who were interviewed were asked to describe their experiences with large-scale change efforts undertaken to implement high performance work systems and to share lessons learned, including critical success factors and dilemmas. They were asked about the impetus for change and how change efforts got started, about the roles of leaders and managers, and of internal and external consultants, in the process. They were asked to describe the changes that occurred, how, and in what order; whether there was an identifiable sequence of steps in successful change efforts, and whether a change model was used in those efforts. They were also asked about problems and obstacles encountered, mistakes made and lessons learned, and conditions that seemed critical for success. In addition to the interviews, groupware output was analyzed from three sessions in the workshop that focused on the process of implementing change and experiences of the participants in implementing HPWS which raised interesting challenges, issues, or dilemmas.

Segments of the transcribed interviews and groupware comments which (1) included accounts, syntheses, or interpretations of change events and processes, or (2) presented lessons learned, guidelines, or models for change that were used in or derived from those experiences, were coded if they clearly reflected a theory of change. Segments were coded PC (planned change), EL (emergent learning), or M (mixed), depending on which approach best accounted for their contents.

Preliminary analysis of the coded segments indicated significant differences in the extent to which the competing theories of change explained (1) accounts of actual events in the change processes in particular organizational units as contrasted with guidelines or lessons learned that were extracted from or based on those experiences; and (2) events and experiences reported by managers and internal consultants as contrasted with those reported by external consultants. In a subsequent analysis, segments of the transcribed interviews and groupware comments were sorted and analyzed according to the roles of the respondents—manager (M), internal consultant (IC), external consultant (EC)—and four categories of statements: (1) accounts of actual events in the change processes in particular organizational units (DESCR); (2) synthetic and interpretive statements made by individuals to make sense of and extract lessons from their varied, but direct, experience with large-scale change (INTRP); (3) statements designed to communicate those lessons and learnings to others (SHRLRN); and (4) statements at the workshop designed to make collective sense of shared experiences and lessons learned (COLLRN).

Results

The results of the analyses indicate that overall, an emergent learning model did a better job than a planned change model of accounting for managers' and consultants' experiences with implementing large-scale change designed to create HPWS. However, the explanatory power of the two theories of change differed, depending on the role of the respondent (M, IC, EC) and the category of statement (DESCR, INTRP, SHRLRN). An emergent learning model did a better job of accounting for the events and experiences reported by managers and internal consultants, and for the descriptions of actual change processes and events and syntheses and interpretations of those direct experiences (DESCR and INTRP). A planned change model did a better job of accounting for statements that shared lessons learned or presented prescriptive principles and guidelines derived from experience (SHRLRN) and for statements that attempted to make sense of shared experiences during the workshop (COLLRN). A planned change model also did a better job of accounting for the reports and experiences of some, but not all, of the external consultants.

The three sources of data differed in the proportions of the participants in different roles (M, IC, EC), and in the proportions of coded segments that were classified in the different categories of statements (DESCR, INTRP, SHRLRN, COLLRN). Hence, the results of the analyses are summarized separately for each of the three data sources.

Exemplary Plants/Business Units Two of the exemplary units were greenfield manufacturing plants. The third was a customer service unit. Interviews about the change events and processes in those units were conducted with managers during site visits. Most of the managers' statements were descriptive accounts of actual events in the design and implementation of change in their unit (DESCR). A smaller number were summarizing and interpretive statements that made sense of or extracted lessons from their direct experiences (INTRP).

Both of the plants used a modified sociotechnical systems model to design their technical and social work systems. Not surprisingly, accounts of the original design and implementation were best explained by a planned change model. However, accounts of the evolution of those systems and of the design, implementation, and ongoing modification of various support systems were better explained by an emergent learning model. The customer service unit used an empowered teams approach to designing and implementing its high performance work system. An emergent learning model did a better job than a planned change model of explaining the events and processes of change described by managers in that unit.

Managers interviewed in all three sites described a process of trial and error discovery in the lengthy (7-10 years) evolution of their goal setting and alignment, work processes, information systems (especially those needed to support self-managing teams), and human resource systems and practices, including recruitment and selection, compensation, performance management, and training and development. In all three sites, accounts of the actual course of implementing change reflected an action learning approach.

Interviews with Internal (Corporate Staff) and External Consultants The theory of change that was most consistent with the events and processes discussed by internal and external consultants in their telephone interviews depended on both the role of the respondents and on the types of statements they made. Interview segments which reflected a theory of change were coded for that theory (PC - planned change; EL - emergent learning; or M - mixed). and for the type of statement (s) made in it (DESCR, INTRP, or SHRLRN). Frequencies were tallied for each of the three change theory codes by type of statement, within and across respondents.

For eight of the twelve respondents (one manager, three of five internal consultants, and four of six external consultants), the change theory that best accounted for statements in the codable segments of their interviews varied systematically with the type of statement. For those eight, DESCR and INTRP statements were much more likely to reflect an emergent learning model, and SHRLRN statements were more likely to reflect a planned change model. For the remaining four respondents, a preponderance of their statements in every category reflected an emergent learning change model. A subsequent rereading of their transcripts suggested that they all operated with strong mental models that reflected an emergent learning approach.

Although each interview contained all three types of statements—DESCR, INTRP, SHRLR—the relative frequency of the three types varied with the repsondent's dominant role. Since the interviews also varied considerably in length, to facilitate analysis across respondents, each interview was also coded for its modal type of statement and the dominant change theory that it reflected. Table 1 displays relationships between respondents' dominant role, modal type of statement, and dominant change theory.

Table 1. Respondents' Dominant Change Theory by Dominant Role and Modal Type of Statement

	DESC	INTRP	SHRLRN
Manager (N=1)	=== 1 === EL		
Internal Consultant (N=5)	=== 2 === EL M-EL	==== 2==== EL	=== 1=== M-BAL
External Consultant (N=6)			===== 3 ==== EL-2 M-PC
	=================	======= 3 ======= EL-2 M-PC	=================

EL = Emergent learning
M-EL = Mixed, emergent learning
M-BAL = Mixed, balanced
M-PC = Mixed, planned change

The dominant role of one of the twelve respondents was manger; five were internal consultants, and six were external consultants. Nine of the twelve respondents could be classified as making a modal type of change statement: three were DESC, two were INTRP, and four were SHRLRN. The statements made by the remaining three respondents were evenly spread across the three types.

In seven of the twelve interviews, an emergent learning model explained a preponderance of the coded segments. The remaining five were all mixed models. None of the interviews reflected a predominately planned change model. Of the mixed models, one was balanced between PC and EL, two emphasized a PC approach and two emphasized an EL approach,

As indicated in Table 1, the modal type of statement made by respondents varied systematically with their dominant role. The modal statements of the manager and four of the five internal consultants were DESCR or INTRP, whereas the modal statements of four of the six external consultants were SHRLRN. The remaining external consultants did not have a modal type of statement.

For the nine respondents whose interviews could be classified with a modal type of statement, their dominant change theory was related to the modal type of statement. The dominant change theories of the five respondents whose modal type of statement was DESCR or INTRP were emergent learning models or mixed models that emphasized an emergent learning approach. The dominant change theories of the four respondents whose modal type of statement was SHRLRN were more varied: two were emergent learning models and two were mixed models, one of which emphasized a planned change model and one was balanced. Two of the three respondents whose interviews could not be classified by a modal type of statement had an emergent learning dominant change theory and one had a mixed model, emphasizing a planned change approach.

Workshop on Implementing High Performance Work Systems Groupware output was analyzed for the three workshops sessions that focused on the process of implementing change. Because some comments carried the initials of participants and others were made anonymously, it was not possible to extend the analyses of individual respondents' telephone interviews to include their groupware comments. As a result, groupware comments were analyzed at an aggregate level only. Comments focused on the process and steps of implementing change were predominately comments which shared lessons, principles or guidelines (SHRLRN), or attempted to made sense, in the groupware interactions, of the collective experiences reported (COLLRN). Those comments reflected a mix of emergent learning and planned change models.

In contrast to participants' individual interviews, in which emergent learning models were the dominant models of change overall, planned change models were the dominant models consistent with these comments. Approximately 60% of the groupware comments about the process and steps in implementation were consistent with a planned change model. The remainder were more consistent with a mixed or emergent learning model. Comments reporting specific experiences implementing HPWS which raised interesting challenges, issues, or dilemmas, however, were predominantly DESCR or INTRP, and were overwhelming consistent with an emergent learning model.

Discussion and Conclusion

The results of this research indicate that overall, an emergent learning model did a better job of explaining accounts and interpretations of large-scale change efforts undertaken to implement high performance work systems than a planned change model. But, the results also suggest that as practitioners and consultants moved from descriptions of actual change processes and events to extract lessons from their varied experiences of large-scale change, and to communicate those lessons to others (SHRLRN), or make collective sense of their shared experiences and lessons (COLLRN), events and processes that were originally described in a way that was consistent with an emergent learning approach to change were increasingly presented as components of a systematic framework or as sequential steps in a planned change model for implementing high performance work systems. These results suggest that there is a tendency for a planned change model to be used as practitioners and consultants seek to generalize lessons from their experience, and not surprisingly, that external consultants tend to have and use planned change models more than managers and internal consultants

Several explanations can account for these results. One interpretation is that the change events described by managers and corporate staff in this project tended to precede the development of planned change models and approaches. Early efforts to build high performance work systems, such as those described by participants in this study, were begun at a time when there was little shared knowledge or experience about the key components that needed to be included and aligned, and the supporting systems that needed to be developed and implemented. As experience accumulated, process models of change were developed, based on the growing body of knowledge about implementing large-scale change efforts. External consultants, who have experience working with diverse organizations on large-scale change efforts are better able to synthesize knowledge gained from their work in diverse settings and to codify that knowledge in the form of process models which they then use to guide future efforts requiring large-scale transformational change.

The results are also consistent with another interpretation, however. As practitioners and consultants attempt to document their learning and provide a useful road map for other organizations, they may reconstruct their original accounts of messy, emergent processes of change, crises, and learning, into models for planned change, systematic frameworks, and blueprints. In doing so, they may present a process that is more rational and top-down than it had originally been reported—sometimes in the guise of "given what we've learned, how should it be done" or "how would we do it now if we were starting from scratch." Even when such models and frameworks were presented with caveats such as " typically the steps do not occur in a fixed sequence" or " of course the process of change is iterative," they were frequently interpreted during collective sense making discussions and groupware interactions as providing the basis for a model of planned organizational change that was often said to be best implemented through a top-down initiative.

Contributions to HRD

The results of this research suggest that an emergent learning process may be the norm in large-scale transformational change, even when an emergent learning model is not the mental model guiding change, as in the case of implementing high performance work systems. The results also underscore the importance of mental models for how experience is reconstructed and shared. Even when change resembles an emergent learning process, it may be reconstructed as a more orderly, logical, and even planned change process if the dominant mental model is one of planned change. One reason for the growing popularity of learning organization models may be that the assumption of messy, trial and error change, which may correspond better with reality than the dominant planned change model, is built into the models themselves.

References

Beckhard, R. & Prichard, W. (1992). *Changing the essence: The art of creating and leading fundamental change in organizations.* San Francisco, CA: Jossey-Bass.

Beer, M., Eisenstat, R. A., & Spector, B. (1990). *The critical path to corporate renewal.* Boston, Ma: Harvard University Press.

Gephart, M. A. & Van Buren, M. E. (1996). Building synergy: The power of high performance work systems. *Training & Development*, 50 (10), 21-36.

Kilman, R. H., Covin, T. J & Associates (Eds.), (1990) *Corporate transformation: Revitalizing organizations for a competitive world.* San Francisco: Jossey-Bass.

Lewin, K. (1951). *Field theory in social science.* New York: Harper & Row.

Porras, J. I. & Silvers, R. C. (1991). Organization development and transformation. *Annual Review of Psychology*, 42, 51-78.

Redding, J. C. & Catalanello, R. F. (1994). *Strategic readiness: The making of the learning organization.* San Francisco: Jossey-Bass.

Watkins, K. E. & Marsick, V. J. (1996). *In action: Creating the learning organization, Vol. I.* Alexandria, VA: American Society for Training and Development

Yin, R. K. (1994). *Case study research: Design and methods* (2nd ed.). Thousand Oaks, CA: Sage.

Novice and Expert Learning: Impact on Training

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This study examined the different learning processes used by novices and experts. Twenty semi-structured interviews were conducted with novice and expert nurses. Results indicated that novice learning is contingent on concept formation and the feelings novices experience in the context of practice. Expert learning was identified as a constructivist process using active concept integration and self-initiated strategies. Novices and experts also identified different factors that facilitated or hindered their learning.

Professional development patterns have been studied in physicists,(Chi, Feltovich, & Glaser, 1980), pilots (Dreyfus & Dreyfus, 1985), and nurses (Benner, 1982, 1983, 1984, Benner & Tanner, 1987). These studies demonstrated that professionals grow in their chosen career as they gain experience within the context of their work setting. Studies demonstrated that professionals move through a developmental continuum in which they progress from a novice to an expert. For example, in physics (Chi, Feltovich, & Glaser, 1980) studies analyzed the differences between experts and novices in solving physics problems. Findings indicated that "experts initially abstract physics principles to approach and solve a problem representation, whereas novices base their representation and approaches on the problem's literal features" (Chi, et al., 1980, p. 121).

Dreyfus and Dreyfus (1980, 1985) identified that professionals move through five stages of career development which they labeled novice, advanced beginner, competent, proficient and expert. A brief description of these stages is provided here.

In studies with nurses and pilots it was found that novice professionals tend to govern their practice with rule-oriented behavior (Dreyfus & Dreyfus, 1985, Benner, 1982, 1984, Benner & Tanner, 1987). Since novices have little experience with real situations they must rely on the rules they have learned in their prepatory education to function.

As the novice professional moves on to the advanced beginner stage acceptable performance is demonstrated. "This person [advanced beginner] is one who has coped with enough real situations to note the recurrent meaningful situational components" (Benner, 1982, p. 403). Advanced beginners start to differentiate situations but still have great difficulty determining the important from the unimportant.

Competent professionals have usually been in practice 3-5 years. These professionals can organize and plan activities, they are consciously aware of the plan, and feel they have an ability to cope with unpredictable situations.

The proficient professional begins to have a holistic understanding of the work. For example, proficient nurses have an understanding of the client, begin using maxims or short coded statements to describe client care, and pick out aspects of care that stand out.

Finally, the expert professional "has an intuitive grasp of the situation and zeros in on the accurate region of the problem without wasteful consideration of a large range of unfruitful possible problems situations" (Benner, 1982, p. 406). Expert nurses (Benner, 1984) have an unusual perceptual ability to recognize patterns in clinical situations. This pattern recognition goes beyond the theoretical and applies to the uncertainty of real-life situations. Experts also possess the skill of similarity recognition. This is the capacity to recognize similarities in client conditions even though the presenting symptoms or situation may be dissimilar. Similarity recognition includes the ability to draw out similarities in ambiguous situations. Experts also possess a common sense understanding which is a deep understanding of the experience of the client. This understanding is often based on similarities in language, culture, and experience of the expert and the client. Experts also develop a sense of salience which is the ability to determine what is salient for that particular client in a particular situation. All tasks, observations, and interventions are not seen as equally important. Rather, the specifics for that client are identified and acted upon. Finally, deliberative rationality is the "deep web of perspectives that causes them [experts] to view a situation in terms of past situations. Thus, the expert has learned to expect certain events and even selectively to attend to certain aspects of the situation" (Benner & Tanner, 1987, p. 28).

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Even though previous research clearly articulates a pattern of professional development, there are many outstanding and unanswered questions. One of these unanswered questions is: *Do novice professionals learn in a fundamentally different ways than expert professionals*? The purpose of this study was to develop distinctions between the learning processes that underlie the novice to expert continuum of professional practice development.

Significance of the Research

The prevailing wisdom in regard to professional development is that novice professionals will develop based on the experiences they encounter in their work setting. Roger's "adoption of innovation model" (1971, 1983) described how practice changes are initiated after the learner adopts a new idea and transfers it to the practice setting. The conventional view (Cervero, 1988) has been that professionals learn in one setting and transfer that information to their work environment. Schon (1987) expanded this view in his work on the development of reflective practice in professionals, but stopped short of identifying the actual learning processes in reflective practice.

In contrast to the above views, Daley (1997) found in a study of nurses who attended continuing education programs that experienced professionals do not apply or transfer knowledge from theory to practice. Rather, they go through a complicated process of constructing a knowledge base in practice. Constructing a knowledge base involved the integration of thinking, feeling, and acting segments of the professional role. However, in this study (Daley, 1997) novice practitioners did not describe the relationship between continuing education programs and practice the same as experts. Thus, the question addressed in this study was what is different about the way novices and experts learn?

This study is significant because in the United States, business and industry, including health care, spends billions of dollars on the training and development of professionals. "Employers spend over $50 billion per year on formal employee training and education. Approximately $180 billion per year is spent on informal, on-the-job training" (Rowden, 1996, p. 3). Most of this training is targeted at the novice professional and teaching techniques are used that foster the learning of novices. Uncovering the differences between how novices and experts learn, can help shape professional development programs to the most appropriate level and enhance the learning outcomes for different professional groups. Improved learning outcomes have the potential to improve professional services. More specifically targeted education for professionals can lead to a more cost effective delivery of continuing professional education and staff development programs.

Research Questions

A qualitative interpretivist approach (Guba & Lincoln, 1989) was used to study the following research questions:

1. What different learning processes are used by novice and expert practitioners?
2. How do those learning processes contribute to professional practice development?
3. What factors limit, change or alter learning process of novices and experts?

METHODOLOGY

Twenty nurses served as the purposive sample for this study, 10 novice practitioners and 10 expert practitioners. Novices and experts, identified by employers and peers, were invited to participate in the study. Two data collection methods were employed, interviews and clinical narratives. Semi-structured interviews were used to examine how nurses learned to think in clinical practice. Specifically, the interviews probed how novices and experts acquired new information, how they thought in clinical practice, how they learned from experience and how they made connections between different clinical cases. Additionally, novices and experts were asked to write clinical narratives that described actual clinical cases in which they felt significant learning occurred. These narrative addressed the client case, what was learned, how that learning changed or altered their practice and how they learned to learn in practice.

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Interview and clinical narrative data were transcribed and analyzed using a modified constant comparative method (Glaser and Strauss, 1973). Data analysis strategies included the use of concept maps, category themes, and a system of matrices to compare group and individual data.

RESULTS

Preliminary findings indicated that novice nurses tend to learn through more formal mechanisms, including review of policy or procedures, attendance at continuing education programs and reading journals. Novices appeared to learn through a process of concept formation. Experts, however, seemed to use more informal mechanisms, including consulting peers and other health care professionals. Experts constructed a knowledge base for themselves in the context of their practice. They obtained information from multiple sources, processed that information through peer-based dialogue, and changed their practice based on the revised meanings they created. Additionally, experts in this study, described themselves in two ways. Some described themselves as "serving their clients" and others described themselves as "a resource to my peers." These descriptions were often influenced by the specific role the expert played in their organization and impacted how the expert learned from their practice.

Different Learning Processes of Novices and Experts The results of this study indicated that novices and experts used different learning processes. Novice learning processes (See Figure 1) tended to be contingent on the process of concept formation and how that process was affected by fear, mistakes and the need for validation. To form concepts, novices described how they spent a great deal of time "just soaking up information". One nurse described how she felt like a "sponge" and continually

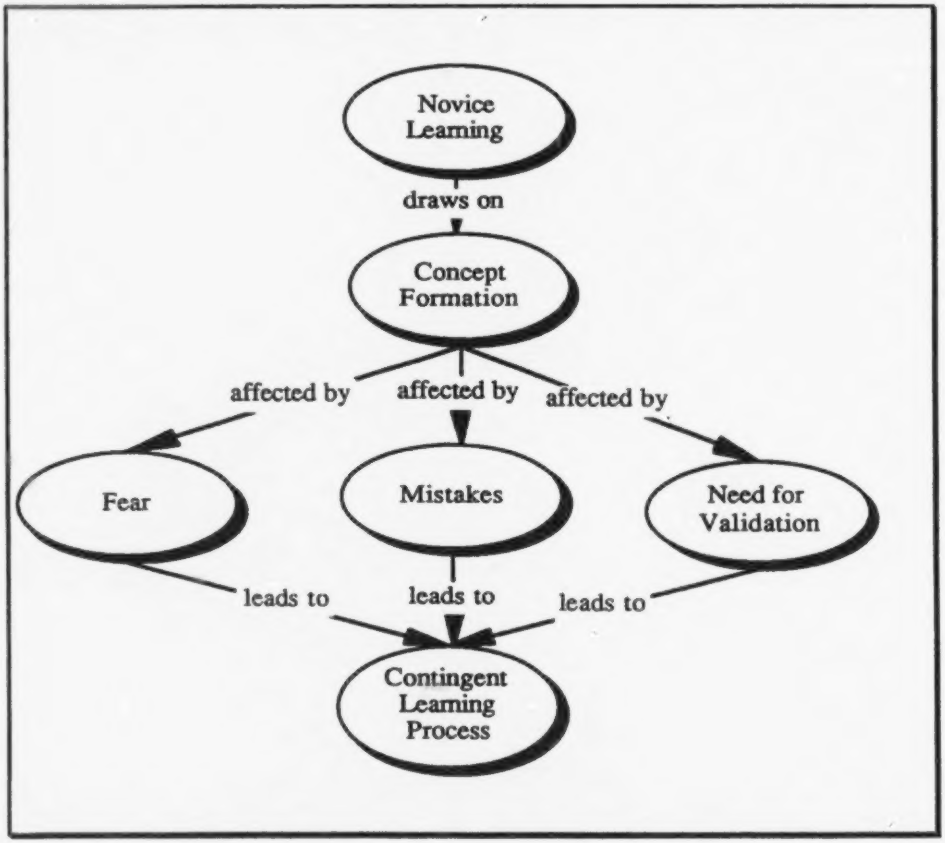


Figure 1: Novice Learning Processes

tried to absorb as much as she could hold. Novices described how they "did not even know, what they did not know" so they would tend to "adapt to the ideas of others". "Everything I am learning is new", stated one novice, "so I just take it in and try to remember it". One nurse stated, "You know it's like that movie, 'just show me the money', well, just show me the procedure! I just need to learn how to do it." In this study, novices described how they were still forming concepts and striving to "sort it all out".

Novices described a process of concept formation similar to that defined by David Ausubel (1978). "In concept formation, the learner generates hypotheses or problem-solving propositions that aim at defining, the abstracted criterial attributes of the concept to be learned" (Ausubel, 1978, p. 100). However, this concept formation process was then affected by the novice's feelings about the context of their practice. Novices described feeling "overwhelmed", "scared to death" and they were "terrified of making a mistake". Novices described how they "needed validation" for procedures and ways of acting in their clinical practice.

Novices used the learning strategies of "asking experts, particularly the physician", "looking it up", and "taking formal courses", but these strategies were used when the novice was directed to do so. Novices indicated that rather than deciding what to learn they waited to be told. One novice indicated, "Sometimes I feel so overwhelmed, I just need to be spoon-fed the information".

Expert learning, on the other hand, tended to be more constructivist learning (See Figure 2).

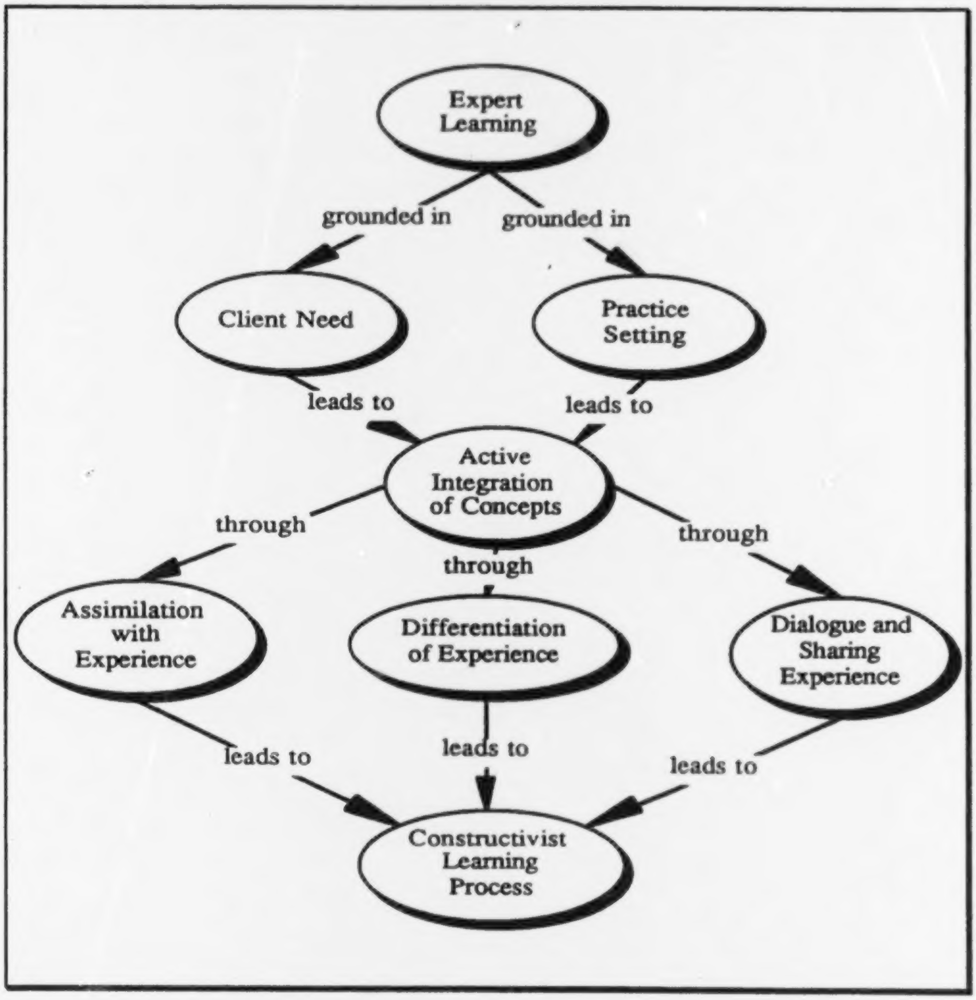

Expert Learning
grounded in
grounded in
Client Need
Practice Setting
leads to
leads to
Active Integration of Concepts
through
through
through
Assimilation with Experience
Differentiation of Experience
Dialogue and Sharing Experience
leads to
leads to
leads to
Constructivist Learning Process

Figure 2: Expert Learning Processes

Experts solidly grounded their learning in the needs of their clients and the context of their practice. Experts indicated that they "had a blueprint in their mind" of what their client needed and would make sure they had the information needed to meet those needs. Experts also indicated that they would actively learn new information because "that is what I need to know to work here". One nurse practitioner described how she identified that she was seeing more and more clients in need of pap smears. Since her educational background happened to be in gerontology, she had not developed this particular skill. The learning action she initiated was to arrange time with the OB-GYN nurse practitioners in her clinic so that she could add this skill to her knowledge base. This nurse took a very active role in seeking out the information she needed to provide care to her clients.

Experts also described that this active integration of concepts included their ability to "improvise", to "pick up little things", to "draw on other professional experiences", and to "draw on personal experiences". Experts indicated that both their personal and professional maturity contributed to being able to "put together the big picture".

Experts viewed formal learning opportunities as "background material" and felt that it was "being in the practice that mattered". Experts would use learning strategies of reading, library research, and discussion with colleagues. The difference was that for experts this was a much more active and self-initiated process. Experts indicated that they would go "searching themselves" for what they needed to learn. One expert stated, "I am at a point in my career where I really teach myself what I need to know".

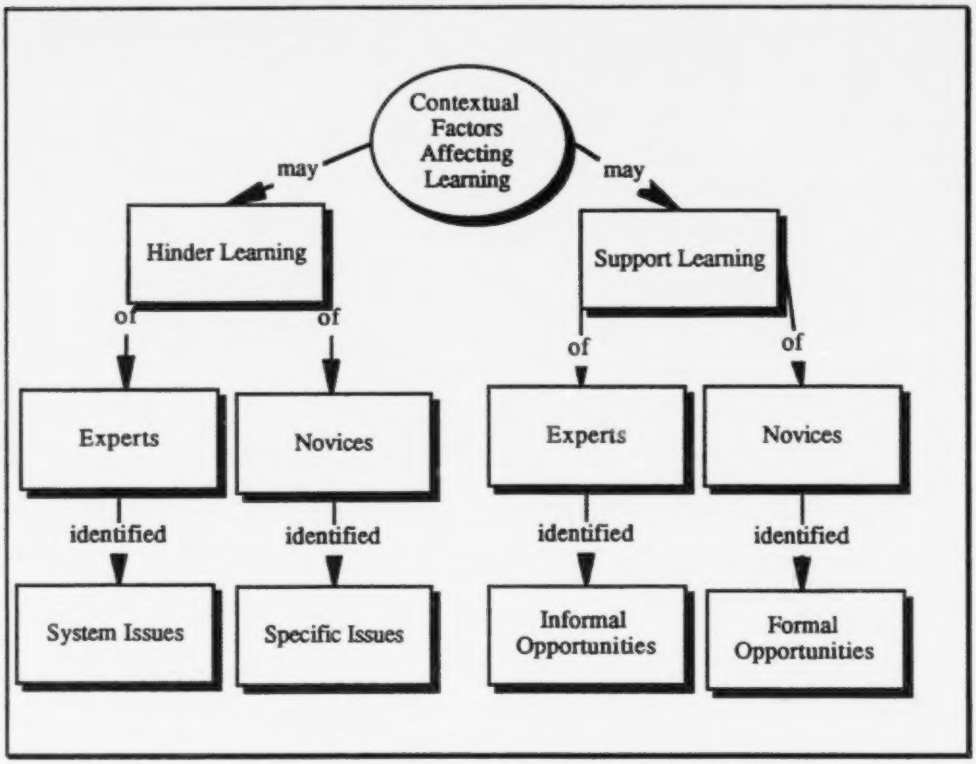
Experts also used their experiences in a different way. Experts would learn by assimilating new information with their past experiences or by differentiating their experiences from the new information. Experts primarily learned through a process of dialogue and sharing. Experts would "go to the person with the best information, whether the person is a physician or nursing assistant" and then they would "toss around ideas" or "listen to what that person knew". One nurse described that in the home care agency in which she worked each nurse had a desk in a small cubicle. She stated, "Some of my best learning is when I push my chair back, lean around the corner and say to the person next to me, I have a client with thus and so going on, ever run into that? Then we get into this exchange of ideas that is just great".

Experts described their learning similar to constructivist learning processes. Experts used an active process of creating their own knowledge base by seeking out information and assimilating that information with their current knowledge base. This process then changed the character and meaning of both the new information and the previous experience, because the expert would derive a deeper level of meaning and understanding in the process.

Finally, experts indicated that they felt a great responsibility to learn so that they could share information with colleagues. Experts often felt a responsibility to "give something back to the profession by sharing what I know". It was often this feeling of responsibility that motivated experts to search out the most current information on a variety of topics. Experts learned so that they could share and at the same time learned within the process of sharing.

Factors that Support or Hinder Learning Novices and experts identified different factors that support or hinder their learning within the context of professional practice (See Figure 3). Novices identified that formal learning opportunities such as having a nurse educator available, having textbooks on their unit and attending care conferences were supportive. Experts unanimously identified that informal opportunities such as dialogue with colleagues facilitated their learning.

When asked to identify contextual factors that hinder learning novices described specific issues such as time, not enough in-service education sessions, and low staffing. Conversely, experts identified systematic issues such as politics, resources, and organizational structure. For example, one expert described how her agency was split into three specialty areas for service provision. She felt that this hindered learning because staff only learned the specialty, had a very narrow focus, and "there was no cross-over".


Contextual Factors Affecting Learning
may
may
Hinder Learning
Support Learning
of
of
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Novices
Experts
Novices
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identified
System Issues
Specific Issues
Informal Opportunities
Formal Opportunities

Figure 3: Contextual Factors Affecting Learning

Conclusions and Implications in HRD

This study has implications for learning needs assessment and program planning within training and development departments. First, trainers need to expand their view of traditional learning needs assessment and incorporate more diagnostic skills. Trainers need to be able to assess the learning needs of their audience, as well as, their career stage. Within the assessment of career stage development, trainers could include an assessment of learning processes used by professionals at various career stages. A clear assessment and diagnosis of the learning processes that professionals are using has the potential to allow the trainer to facilitate learning in a more individual fashion.

Second, trainers need to recognize that novices learn in a contingent fashion and that this type of learning is a natural process linked directly to their stage of career development. Trainers can support novice learning by simply providing information, helping the novice set learning priorities and supporting the novice during the time that they feel overwhelmed and fearful.

Third, trainers need to adapt to the constructivist learning processes of experts. Trainers need to provide avenues for experts to search out information, support the informal learning process they develop, and encourage dialogue around clinical cases. However, because experts ground their learning in client needs and the context of practice, the dialogue around cases needs to be grounded in "real" practice examples of the experts involved, not the decontexturalized case studies that are often used in training programs.

Finally, trainers can work to decrease factors that hinder learning and to support factors that facilitate learning. By combining the novice's description of specific factors hindering learning with the expert's description of systematic issues that hinder learning, trainers can work toward broad based organizational change. The expert's understanding of complex systematic issues within organizations and the impact of those systematic issues on the learning of individuals can be a rich resource for trainers.

Additionally, trainers can continue to develop the formal learning opportunities used by novices, while expanding the informal learning opportunities used by experts.

In summary, the findings of this study indicated that the learning processes underlying the novice to expert continuum of professional development will require trainers to be flexible, adaptable, and to develop the ability to facilitate learning by using a wide variety of methods. This study provides trainers with information on how to foster contingent learning for novices and constructivist learning for experts.

References

Ausubel, D., et. al. (1978). Educational psychology: A cognitive view (2nd. ed.) New York: Werbel and Peck.

Benner, P. (1982). From novice to expert. American Journal of Nursing, 82, 402-407.

Benner, P. (1983). Uncovering the knowledge embedded in practice. Image: The Journal of Nursing Scholarship, 15(2), 36-41.

Benner, P. (1984). From novice to expert: Excellence and power in clinical nursing practice. Menlo Park, California: Addison-Wesley Publishing Company.

Benner, P., & Tanner, C. (1987). Clinical judgment: How expert nurses use intuition. American Journal of Nursing, 87, 23-31.

Cervero, R. (1988). Effective continuing education for professionals. San Francisco: Jossey-Bass, Inc.

Chi, M. T. H., Feltovich, P. J., & Glaser, R. (1980). Categorization and representation of physics problems by experts and novices. Cognitive Science, 5, 121-152.

Daley, B. (1997). Creating mosaics: The interrelationships of knowledge and context. Journal of Continuing Education in Nursing, 28 (3), 102-114

Dreyfus, H., & Dreyfus, S. (1985). Mind over machine: The power of human intuition and expertise in the era of the computer. New York: Free Press.

Dreyfus, S. E., & Dreyfus, H. L. (1980). A five-stage model of the mental activities involved in directed skill acquisition (Unpublished Report supported by the Air Force Office of Scientific Research No. Contract F49620-79-C-0063). University of California at Berkeley.

Glaser, B. G. & Strauss, A. L. (1973). The discovery of grounded theory: Strategies for qualitative research. Chicago: Aldine Publishing.

Guba, E., & Lincoln, Y. (1989). Fourth generation evaluation. Newbury Park: Sage Publications.

Lincoln, Y., & Guba, E. (1985). Naturalistic inquiry. Newbury Park: Sage Publications.

Rogers, E. (1971). Communication of innovations: A cross-cultural approach (2 nd. ed.). New York: The Free Press A Division of MacMillian Publishing.

Rogers, E. M. (1983). Diffusion of innovations (3rd. ed.). MacMillian Publishing, The Free Press.

Rowden, R. (1996). "Current realities and future challenges." In Robert Rowden (ed.) *Workplace Learning: Debating Five Critical Questions of Theory and Practice*. New Directions for Adult and Continuing Education, no. 72, San Francisco: Jossey-Bass.

Schon, D. A. (1987). Educating the reflective practitioner: Toward a new design for teaching and learning in the professions. San Francisco: Jossey-Bass, Inc.

Tanner, C., Padrick, K., Westfall, U., & Putzier, D. (1987). Diagnostic reasoning strategies of nurses and nursing students. Nursing Research, 36(6), 358-363.

Studying Transformational Learning — It Can Be Done!

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As part of a doctoral dissertation, it was necessary to develop and test a qualitative research model for studying transformational learning. The model represents a practical way to determine whether transformational learning occurred as a result of participating in a corporate leadership program (Action Reflection Learning™). The paper argues for the necessity of demystifying the study of transformational learning, so HRD practitioners can study it within organizations — where fostering transformational learning is increasingly important.

There is little doubt that today's organizations find themselves in the midst of unprecedented change. Powerful global forces are compelling organizations to learn, innovate, and change in order to remain competitive. To be successful in this environment, organizational leaders no longer can continue to do things the way they have in the past. Becoming an effective leader in the complex 21st century "requires movement into critical thought, into the capacity to step outside of one's own assumptions to reflect upon them in a new light" (Parks, 1997, pp. 5-26). In other words, what is needed are executive development programs that foster transformational learning. This is why I chose my dissertation topic — whether and how executive participants of a corporate Action Reflection Learning™ (ARL™) program experienced transformational learning.

The definition of transformational learning used in this paper is: Learning becomes transformative "when assumptions are found to be distorting, inauthentic, or otherwise unjustified. Transformational learning results in new or transformed meaning schemes (points of view), or when reflection focuses on premises, new or transformed meaning perspectives (habits of mind)" (Mezirow, 1991, p. 111). Mezirow was selected as the theoretical framework for transformational learning for two reasons. First, Mezirow represents the most comprehensive transformational learning theory, which integrates a number of theoretical contributions, including Dewey, Freire, Blumer, Kuhn, Gould, and Habermas (Marsick and Finger, 1994). Second, transformational learning seems inherent in ARL™ which is the leadership development program being studied. ARL™ is one approach for fostering Mezirow's premise reflection that can lead to perspective transformation (O'Neil & Marsick, 1994).

As I began to write the literature review for my dissertation, one key question I asked of the current literature, was how does one determine whether transformational learning occurred? I found several transformational learning studies that used Mezirow as a theoretical framework. (See Taylor, 1997, for a comprehensive literature review of many of these studies). With all the transformational learning studies that exist, I thought it would be easy to find data collection and analysis instruments I could replicate or edit. However, as I began to read through some of these studies and related literature, I found a critical piece missing, that being any type of recommended research model (e.g., data collection and analysis instruments) for determining whether transformational learning occurred.

A key theme across many of these studies was the vagueness around determining whether transformational learning indeed had taken place. Some studies included an interview schedule, but little or no explanation around how the researcher used the interviews to determine whether transformational learning had or had not occurred. Interview schedules across the studies were extremely varied with little or no consistency. In studying transformational learning, "there is no body of literature, no easily replicable data collection instruments which have been tested for

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reliability and validity, and no concepts in existence that are generally agreed upon as informing discussion and analysis" (Brookfield, 1991, p. 45). Mezirow (1991, 1997) and Brookfield (1991) agree that transformational learning is very difficult to study.

Although many theorists (Apps, 1996; Boyd and Myers, 1988; Brookfield, 1991; Daloz, 1986; Mezirow, 1991), write about transformational learning, only Mezirow and Brookfield make any mention of how to study it. Even Mezirow's and Brookfield's contributions in this area are limited. Both theorists suggest research methods to use in the study of transformational learning, such as critical incidents, open-ended interviews, and learning journals (Brookfield, 1991; Mezirow, 1991). Neither theorist, however, provides possible data collection or analysis instruments that HRD practitioners could use to evaluate whether transformational learning occurred.

This gap in the literature, left me perplexed. As described above, Mezirow's transformational learning certainly will be a key element in helping today's leaders face ever-changing organizational challenges (Marsick and Finger, 1994). Over $12 billion is spent annually on executive development programs (Bryne, 1991). Many companies expect that an outcome of these costly executive programs will be transformational learning, yet there is no easily replicable research model to determine whether this desired outcome actually is being achieved. There exists a need to demystify and simplify the study of transformational learning.

I had a pressing need to do so, because I had to develop data collection and analysis instruments to begin my dissertation research. After months of drafting, editing, and testing, I finally created a research model that I used to collect data for my dissertation research. I am currently in the process of using the coding scheme (described below) to analyze the data. I can only hope that this model will help HRD practitioners increasingly study transformational learning.

Research question:

Can this research model (e.g., pre-interview form, interview schedule, critical incident, and coding scheme) measure whether transformational learning occurred?

Methodology:

The research model is based on a qualitative case study design of the perceptions of people in one institution. Mezirow (1991) and Brookfield (1991) agree that qualitative rather than quantitative methodologies are best suited for studying the complex phenomenon of transformational learning.

> "Studies that are trying to do something as complex and sophisticated as entering into another's interpretive frame of reference can only be accomplished through talking intensively and lengthily to that person, through watching the person and through reading personal jottings...In other words through interviews, observations, critical incidents and unobtrusive measures such as analyzing learning journals" (Brookfield, 1991, p. 45).

Qualitative transformational learning research has been criticized by quantitative research proponents for not having enough empirical vigor (Taylor, 1997). I disagree with this criticism. If I was conducting a quantitative study, I would run statistics on my data and then tell the story I wanted to tell with respect to these statistics. Instead, I now have 28, 50+ page interviews to read over and over and code line by line, and then have other people test for inter-rater reliability. Inter-raters use the same coding process on about five of the interviews, and we must come to at least an 80% agreement on our assigned codes. This seems like more time and vigor than running statistics.

This research model also is designed for retroactive studies where participants reflect back on their experience, as opposed to observing and recording the learning experience as it actually is happening. In my study, executive participants had completed the ARL™ program from one to six years ago. While Taylor (1997) calls for more longitudinal transformational learning research, this often is impractical in today's busy and ever-changing corporate world. The amount of time and money required to follow someone for a number of years, often exceeds what a company feels is the benefit of such research. In addition, with the rate of change and turnover, following the same person (in the same company) for a number of years may not be possible.

The research model

The research model consists of a four-step process: 1) a pre-interview form sent to past participants before their scheduled interview, 2) a 90-minute audio-taped interview, 3) a critical incident form sent to at least one co-worker per participant who has worked closely with the participant both before and after the program, and 4) a coding scheme used to analyze the interviews. I tested this model, as part of my dissertation research, with 24 executive ARL™ participants (from five different countries), and 24 co-workers (one per participant). I also conducted interviews with three program learning coaches, and one senior level executive to solicit their opinions on the program and what they feel participants learn from the program.

The pre-interview form was sent to participants about two months prior to their scheduled interview. This form asked participants: 1) for typical demographic data such as race, gender, years and type of experience, and 2) to reflect back on their program experience and write down the most significant thing they learned as a result of participating in the program, as well as, what most helped them to learn this. Many participants commented on the value of completing this form prior to the interview, because it gave them some "think time" to reflect back on their program experience prior to discussing it. This form also gave me, the researcher, time to think and prepare for each interview.

The interview was a combination of some carefully crafted questions, and intuitively knowing when to probe further into a participant's statement. The interview schedule follows.

Table 1: The Interview Schedule

Interview Question	*Rationale for Asking the Question*
1. If I followed you through a typical work day, what would I see you doing differently, if anything, that you may not have done before the program? • Make sure to get a comparison of before and after (i.e., How is this different from what you would have done before the program?)	Mezirow's opinion on whether one's actions change as a result of transformational learning has evolved over time. Mezirow (1991) argued that one does not necessarily have to act in a different way as a result of transforming one's perspective. In a 1997 lecture, he said, "what is key is what are they doing differently as a result of perspective transformation." This question helps to identify this, and also sheds light on how one's thinking may have changed as a result of acting differently.
2. I would like to explore more about how your thinking may have changed as a result of the program. In what ways, if any, has participating in the program caused you to see things differently or think about things differently? • Get before and after comparison and the relationship between different thinking and different actions.	In studying transformational learning, the researcher "must map the learner's initial meaning perspective and compare it with his/her later meaning perspective" (Mezirow, 1991, p. 226). Both question one and two also provide the opportunity for the participant to talk generally and openly about his/her program experience.
3. (Optional - Please tell me more about what you identified as your most significant learning on your pre-interview form ________.	This clarification question was asked only if they did not reference their pre-interview form answer in interview questions one or two.

4. So far, we have talked about many things - what you do differently as a result of the program _________, how you think differently _________, and your answer to the pre-interview question __________. I would like to explore more about one of these things or some combination of them. Which one of these things, or some combination of them, do you see as most significant for you? • What made you choose this/these as most significant for you?	Mezirow (1997a) writes, "Be sure and remember not to ask the subjects to define transformational learning for you. You can ask them to identify their most significant experience but you need to define what they are telling you as indeed a transformation in frame of reference." This question helped the interviewee focus on his/her most significant learning(s). The researcher then can explore more about what helped them to learn this, the course of events that led them to learn this, and whether it is indeed transformational learning.
5. Was this something you expected to learn going into the program, or were you surprised to have learned this? Tell me more?	Daloz (1997) believes that if an individual expected to learn something going into a program, then it may not be transformational learning.
NOTE: Here I asked a few questions around what helped them to learn what they identified as most significant in question four, and what made it difficult for them to learn this.	I am not including these questions, because they deal with the second part of my dissertation (how transformational learning occurred versus whether it occurred that is the focus of this paper).
6. Now let's go back and summarize the course of events that occurred that led you to learn this/change your thinking/actions around this issue (what they identified in question four). Why don't we begin at the starting event —' please try to remember back in time to what first caused you to question your previous ways of thinking/acting (or to be open to thinking that maybe your original way of thinking/acting was not the best/only way)? • Help me understand what happened over time to help you do/believe __________ instead of _________ (e.g., what happened before, during - week1_week2_week3_week4, after the program)?	"You must remember that transformations may be *epochal* — transformation in habits of mind triggered by an often traumatic event leading to a disorienting dilemma, or *cumulative* — the result of a progressive, often less dramatic sequence of changes in point of view. I would suspect (cumulative transformations) would be more likely in the context of a particular ARL™ program" (Mezirow, 1997a). Herein lies a very important gap in the current literature. Many existing transformational learning studies use Mezirow's (1991) 10-11 steps in determining whether transformational learning occurred, but these steps only apply to the epochal type of transformation. The literature virtually is silent on what a cumulative transformation looks like. This interview question may help shed light on this.
7. Handout the "during interview leadership reflection" form, and ask interviewee to complete each of the four sentences with a written response. Before the program, 1) The best thing I did as a leader was____, 2) The worst thing I did as a leader was____. After the program, 1) the best thing I do as a leader is ___, 2) The worst thing I do as a leader is ___. Help me understand more about what you wrote? NOTE: If you do the same after the program as before, just write "the same."	As part of my dissertation research, I am particularly interested in transformational learning that occurred around leadership. This question helps get at the comparison of leadership practices before and after the program. In addition, the critical incident form that the co-worker completes includes this same question. This will help directly compare what the participant espouses as the most significant change in leadership practice (if any) to what the co-worker believes/sees.
8. Using a scale of 1 to 5 with 1 being very little change and 5 being very great change, which number best represents how much you have changed, as a leader, as a result of the program? What made you chose the number you did?	This is a nice question to summarize the participant's thinking around how significant of a change was made in his/her leadership behaviors. It can provide additional data for whether transformational learning did indeed occur.
9. Is there anything you might want to add that you think might be helpful?	This question gives the participant an opportunity to add things in an unstructured way.

For those participants that did not experience much significant learning, I focused the interview more toward why not? What prevented you from changing/learning even more?

One key limitation of transformational learning research is "all too often respondents present their espoused theories rather than their theories in use" (Mezirow, 1991, p. 221). To help minimize this limitation, a tailored critical incident form was developed to solicit a co-worker's opinion on how, and how much, the participant had changed. Again, this co-worker was someone who worked closely with the participant both before and after the program. The critical incidents will be analyzed for themes and compared for consistency or inconsistency with the corresponding participant's interview.

To develop the tailored critical incident form, I used the interviewee's transcript to identify three or four things that the interviewee found to be his/her most significant learnings. An example of the tailored portion of the form that went to one participant's co-worker follows:

> In the table that follows are some objectives of the program. Below, please circle the number (in both columns) that best indicates the extent to which you have seen (participant's name) behave in the following ways both before and after the program. Use the following scale and fill in the blank if you have *other* responses.
>
> *1=Almost never   2 = Sometimes   3 = Almost always*

Some Program Objectives	Before Program	After Program
1. Seeks/listens to input from others	1 2 3	1 2 3
2. Facilitates sharing of ideas	1 2 3	1 2 3
3. Takes time to stop and reflect before acting	1 2 3	1 2 3
4. Other: ________________	1 2 3	1 2 3
5. Other: ________________	1 2 3	1 2 3

In addition to this tailored section, the form also included some standard questions that asked about: 1) the co-workers relationship with the participant, and 2) the amount of change the co-worker observed in the participant. Question seven from the participant interview (see Table 1: The Interview Schedule, above) was included, but was asked from the co-worker's point of view. There were three additional standard questions including:

1) Please check the statement that best represents the degree to which you noticed (insert participant's name) change as a result of participating in the program: ___ I noticed no change in him/her, ___ I noticed some change in him/her, ___ I noticed a great deal of change in him/her.
2) Can you think of a situation after the program where you saw (insert participant's name) act in a different way than he/she would have before the program? ___ Yes ___ No. If no, please go to the next question. If yes, please describe the situation in the space provided below. In your description, please include: A. What happened? B. What did he/she say or do in this situation? C. What effect/results did his/her actions have? D. How might he have handled this situation before the program?
3) If you answered no to the above question, in the space provided below, please describe the most significant things you see (insert participant's name) doing differently, if anything, after the program than before the program?

The final part of the research model is the coding scheme used to analyze the participant interviews to determine whether transformational learning occurred. Although I am still in the process of editing the coding scheme, the current version is presented in the results section below.

Results:

The interview schedule, presented above, worked incredibly well across all 24 interviews. This was pleasantly surprising to me, because my interviewees spanned five different international cultures. Although 20 of the interviewees used English as a second language, there were few language difficulties. I also was surprised by the interviewees' ability to recall specific conversations, even those individuals who participated in the program six years prior. One possible interpretation of this is that the program was very valuable, effective, and memorable. Another interpretation is that having the "think time" with the pre-interview form helped participants recall specific experiences.

What is fascinating is that in at least 85%+ of the cases, what the interviewees picked as the most significant in interview question four (above), was *not* what they originally had put as most significant on their pre-interview form. This could suggest that it is valuable to allow reflection time and some discussion time (see interview questions one through three above) before asking a participant to name their most significant learning/experience.

One caution in using the above interview schedule is *not* to treat it as a purely structured interview. There were many times when I used intuition to ask probing questions that were not on the interview schedule. It is critical to get an interviewee to explain in detail what they mean by their answers, and to compare how they were before the program with how they are after the program. For example, it is not enough to say, "I am now a better team player." What does being a better team player look like? How are you defining a team player? How much of a team player were you before the program? Trying to enter someone's meaning perspectives takes a lot of energy and intense listening. I would recommend not conducting more than two interviews per day and making sure to take a reflection and re-energizing break in between the two interviews.

I am quite happy with the design of the critical incident form, as the forms returned thus far have provided a great deal of useful data. They have been quite easy to analyze and resulted in a high degree of inter-rater reliability. The analysis consists of drawing themes and seeing if there is consistency or inconsistency between co-worker and participant views. In one case the co-worker and participant agreed that: 1) after the program the participant delegated more work to others, and 2) the most significant change was that the participant now demonstrates sensitivity to personal issues of others, whereas before the program, the participant ignored or criticized personal issues of others. In another case, the participant felt that his most significant change was to work for the team benefit versus individual benefit, but the co-worker saw no change in this area. This could mean a number of things, including: 1) there is indeed an inconsistency between the participant's walk and talk, 2) the co-worker is unable to see that the participant has changed, etc.

As of today, I have coded five of the 24 interviews using the coding scheme below. Although five is only about 20% of the total interviews, using this coding scheme has resulted in an inter-rater reliability rating of 80% or above. Table 2 shows some results with using the scheme.

Table 2: Portion of Coding Scheme with Exemplary Quotes

Coding Scheme	*Exemplary Quote*
1. **Levels of learning with illustrative actions** (each level includes a change in thinking/knowledge and a transfer of learning to actions code).	
1.1 Level 1 — Learning within existing points of view 1.1A Adding knowledge, refining a skill, or further differentiating/integrating ideas within an existing point of view (without replacing points of view/habits of mind).	1.1A "I got confirmation during the course, that, uh, working with teams, that - that was one of, let's say…one of the things that I was good in. Having a chance to work with an international group, gave me a little bit more confidence…(that) I can handle…an international team. I can work together."

1.1B Using specific program tools (e.g., Myers Briggs, stop/reflect breaks).	1.1B "That stop and reflect, I must say, I do that very often."
1.2 *Level 2 - Transformed point of view* (Mezirow's (1991) "everyday type of transformation").	
1.2A An old point of view is replaced by a new point of view.	1.2A "I came to care more about the personal side of my employees. Before the program, I did not care too much about this...all I cared about was getting good results."
1.2B Acting/behaving in a different way that is illustrative of a new point of view (transfer of learning going beyond application of specific tools, but not fundamental enough to be illustrative of a transformed habit of mind).	1.2B "I spent less time before to get everyone to tell his ideas than I do now. I now pay much more attention to that."
1.3 *Transformed habit of mind*	
1.3A An old habit of mind is replaced by a new habit of mind.	1.3A "I'm a co-dependent person. Specifically care-taker personality. It (the program) helped me heal...my mental illness. I didn't think very highly of myself. I didn't have a great self-image. I guess I thought - when I got accepted into this program - I thought, oh my God, I can't run with the big dogs, and then I found out, hey I can run with the big dogs, and some of these dogs are chasing me. It gave me confidence and awareness that yes I can function at this level. I became self-confident."
1.3B Acting or behaving in a different way illustrative of a new habit of mind (acting fundamentally different).	1.3B "You would see me acting with more self-confidence. I did come back (from the program) with a vision of the role that I could play in this organization and not willing to stay where I was...Sort of pushing for a broader role. (Saying to executive management) - Look, I'm not challenged. I'm bored, you know I want to do more...there's other things I can do. I mean before that (the program) I was at a point in my life where I could put up with doing the same old crap for another ten years and then I'll move on. And this (the program) really said, nah, that's a boring way to live. Why settle for that when you can do more?"

Due to space limitations, I cannot provide a similar table for the remainder of my coding scheme, which follows:

2.0 Evidence of transformational learning.
2.1 Process evidence
    2.1A Disorienting dilemma (2.1Aa: A life transition, 2.1Ab: New awareness (of alternative points of view or effect on others)
    2.1B Exploration/Reflection (2.1Ba: Recognizing one's experience is shared by others, 2.1Bb: Content reflection, 2.1Bc: Process reflection, 2.1Bd: Premise reflection)
    2.1C Other course of events constituting transformational learning. NOTE: This code tracks actions/events/processes, other than the above 2.1A and 2.1B, that may indicate a cumulative type of transformation - a less dramatic sequence or accretion of transformed points of view. (2.1Ca Affective event/processes, 2.1Cb Stalling/getting stuck in the transformational process).
2.2 Outcomes as evidence of transformational learning
    2.2A Feeling validated in taking new actions or in behaving in new ways.
    2.2B Explicitly stating they are changed or different or new
    2.2C More differentiated, inclusive, integrated, or permeable habits of mind.
    2.2D Not knowing before the program that they would learn this

How this contributes to new knowledge in HRD:

I want to be clear that my intent in presenting this research model is *not* to suggest that: 1) this is the only way to study transformational learning, 2) this is a perfect research model without limitations, 3) Mezirow is without critique (a critique which will be included in my dissertation), or 4) other existing studies are not based on solid research models.

Instead, I had two main purposes in presenting this research model. First, I wanted to contribute to a serious gap I saw in the literature — a discussion of research models that can be used to study transformational learning. Second, this model provides HRD practitioners with something they can choose to use as a starting point, in its entirety, or with critique and edits, as they study transformational learning. If nothing else, I hope to have provided a basis for a critical discussion and an inspiration for others, who have studied transformational learning, to publish their research models.

References

Apps, J. (1996). *Teaching from the heart*. Malabar: Krieger

Boyd, R. D., & Myers, J. G. (1988). "Transformative education." *International Journal of Lifelong Education*, 7, 261-284.

Brookfield, S. (1991). "The development of critical reflection in adulthood: foundations of a theory of adult learning." *New Education*, 13(1), 39-48.

Bryne, J. A. (1991, October). "Back to School - Special Report on Executive Education." *Business Week*.

Daloz, L. A. (1986). *Effective teaching and mentoring: Realizing the transformational power of adult learning experiences*. San Francisco: Jossey-Bass.

Daloz, L. A. Discussion with AEGIS students. Teachers College, Columbia University, New York, February, 1997.

Marsick, V., & Finger, M. (1994). Jack Mezirow: In search of a social theory of adult learning. In E. Brugger and R. Egger (Eds.). *Twentieth Century Thinkers in Adult Education*. San Francisco: Jossey-Bass.

Mezirow, J. (1991). *Transformative dimensions of adult learning*. San Francisco: Jossey-Bass.

Mezirow, J. (1997). Lecture. Teachers College, Columbia University, New York, June 19, 1997.

Mezirow, J. (1997a). Letter written by Jack Mezirow in response to a letter from Sharon Lamm, dated July, 11, 1997.

O'Neil, J., & Marsick, V. (1994, Fall). "Becoming critically reflective through action reflection learning." In A. Brooks and K. E. Watkins (Eds.). *The emerging power of action inquiry technologies*, 63, 17-30. San Francisco: Jossey-Bass.

Parks, S. (1997). *The art of learning leadership: A report to the Lilly Endowment*. Boston: Harvard University Kennedy School of Government.

Taylor, E. W. (1997, Fall). "Building upon the theoretical debate: A critical review of the empirical studies of Mezirow's transformative learning theory." Adult Education Quarterly, 48(1), 34-59.

Understanding Learning Climate in Organizations: A Case Study

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Employees are implicitly influenced in their learning behavior by the learning climate. This learning climate refers to the norms and values regarding learning that are embedded within the learning network of an organization. In this study the learning climate in five departments is explored. It is found that two types of learning climate can be distinguished: a standardized, mechanical learning climate and a differentiated, mechanical learning climate.

Today, organizations, and especially managers and educators, invest a lot of energy in organizing training and courses for their employees. This effort is, however, not always rewarded, as is shown in the following example:

> A Dutch chemical firm creates an open learning centre for its production workers. In this learning centre, workers increase their employability through a variety of learning activities. Despite the great amount of time and money put in the project, hardly no workers make use of these facilities.

It is our conviction that these disappointing results are due to the fact that managers and educators tend to overlook contextual factors influencing people's workplace attitudes vis à vis learning. In the above mentioned example, production workers don't feel the necessity to learn because their job demands are low and they work in an atmosphere that doesn't encourage learning. Purpose of this study is to explore the learning atmosphere at the workplace or, more specifically, the way in which the learning climate in organizations influences the learning activities.

Theoretical Framework

The concept of learning climate is common in recent literature on work related learning (Argyris & Schön, 1978; Van Biesen, 1989; Egberts, 1991; Knowles, 1973; Van der Krogt, 1995; Marsick & Watkins, 1990; Pedler, Burgoyne & Boydell, 1991; Temporal, 1978). Also, various instruments have been developed to assess the learning climate in organizations (Bartram, Foster, Lindley, Brown & Nixon, 1993; Egberts, 1991; Pedler, Burgoyne & Boydell, 1991). Despite the acknowledgement of the importance of learning climate, hardly no attention is paid to the development of a theoretical basis.

In this study the concept of learning climate is explored on the basis of the learning network theory, which is a fairly new framework (Van der Krogt, 1995). This theory is synthesized as a model in Figure 1. In the learning network theory, a distinction is made between the learning network

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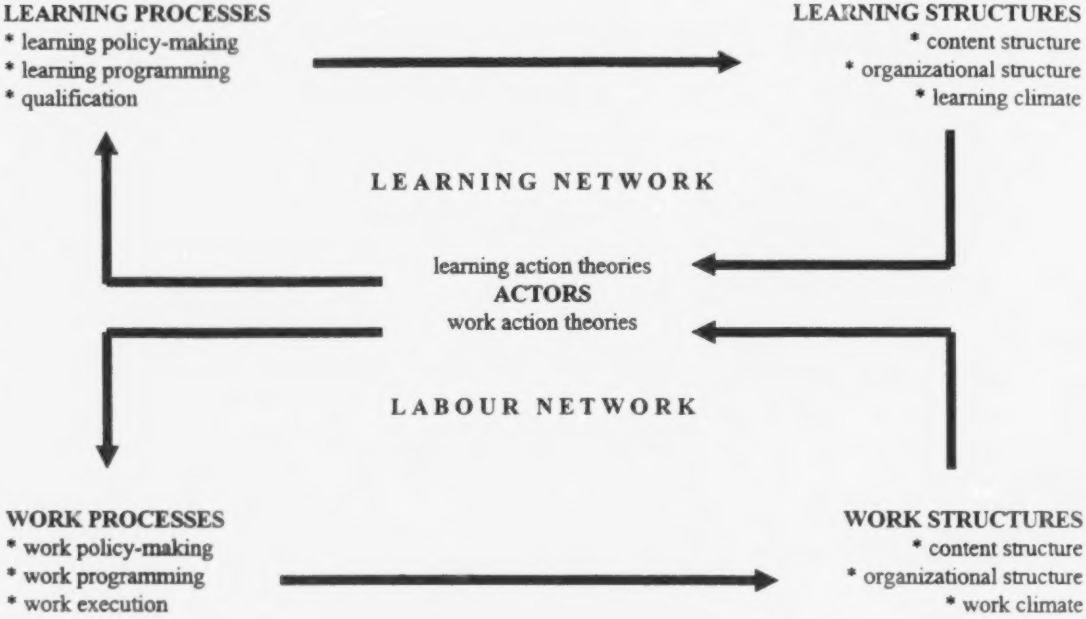
and the labor network within organizations. The learning climate is situated within the learning network of an organization. Below, the concepts of learning network, learning climate and labor network are explained. Also, the relationship between learning climate and the labor network is discussed.


LEARNING PROCESSES
* learning policy-making
* learning programming
* qualification
LEARNING STRUCTURES
* content structure
* organizational structure
* learning climate
LEARNING NETWORK
learning action theories
ACTORS
work action theories
LABOUR NETWORK
WORK PROCESSES
* work policy-making
* work programming
* work execution
WORK STRUCTURES
* content structure
* organizational structure
* work climate

Learning Network The concept of learning network can best be understood with the help of the following example:

> A manager decides that his employees need to learn to use the computer. He contacts an educator to organize a course. This educator hires an external twiner, who teaches the employees. After the course, employees experiment on the computer in the workplace.

This example shows different aspects of the learning network of an organization. First, a learning network of an organization is created by the interaction of different actors in and outside the organization. In the example, actors such as managers, employees and educators are involved in organizing *learning processes*. According to this theory, we can distinguish three constitutive elements of these learning processes: the development of a learning policy, the elaboration of a learning program, and the qualification of the employees.

Second, actors within the learning network act on the basis of their norms and values regarding learning. In the example, the manager considers it important that employees learn to use a computer. As a result of this opinion, he asks an educator to organize a computer course. In the learning network theory, these norms and values regarding learning are called *learning action theories*. The notion of learning action theories refers to the concept of action theories developed by Argyris & Schön (1978).

Third, the norms and values of different actors within the learning network are expressed in *learning structures*. These learning structures consist of a content structure and an organizational structure. The content structure of a learning network refers to the combination of learning activities into learning programs. In the example, two types of learning activities are mentioned. First, the computer course, which can be regarded as a formal learning activity. Second, the experimentation that takes place after the course at the workplace. This can be regarded as an informal learning activity. The organizational structure of a learning network refers to the division of tasks and responsibilities between actors regarding learning. In the example, the manager and the educators are responsible for the way employees learn to use the computer.

Learning Climate In the learning network theory the learning climate refers to the norms and values embedded within the content structure and the organizational structure of the learning network. In the example, a norm embedded within the organization structure would be that 'employees should not carry the responsibility regarding their own learning'. In this study norms are defined as the behavioral guidelines regarding learning. A value underlying the above mentioned norm is 'control'. In the example, the control of the learning of employees is valued. In this study values are defined as 'a collective need to prefer one way of acting above another'.

Labor Network In the learning network theory, the learning network is related to the labor network of an organization. This labor network is similar to the learning network in that actors also interact in processes and create structures on the basis of their norms and values. A difference between the labor network and learning network is that the interactions within the labor network are focused on the organization of work instead of the organization of learning.

Learning Climate and Labor Network An aspect of the learning network theory is that it relates the learning climate to the labor network and, more specific, to the content structure of work. The content structure of work is defined as 'the division of work activities within an organizational department'. As a result of this relationship, it is assumed that the learning climate of a department with group work activities will be different from the learning climate of a department with task work activities. Group work activities come about in organizations which value the horizontal collaboration among employees. Task work activities are dominant in organizations which have a hierarchical orgnaizational structure and a strong division of labor.

Research question

Which norms and values regarding learning can be distinguished within the structure of the learning network of organizational departments which are either characterized by task work activities or by group work activities?

Methodology

Design A multiple case study was applied in five departments, which were selected sequentially (Miles & Huberman, 1994). In three departments group work activities are predominant. The other two departments can be characterized by task work activities. In the five departments, interviews were held and organizational documents were collected. During the interviews, respondents were asked if they had experienced critical incidents regarding learning. The notion of critical incidents is based on the critical incident technique (Flanagan, 1954; Gundry & Rousseau, 1994). Gundry and Rousseau define a critical incident as 'a critical event due to which employees gain insight into the behavioral norms within the organizations'.

Procedure Twenty-two interviews were held from August, 1996 through January, 1997. Respondents ranged from employees to educational advisors and, from personnel advisors to managers. They were chosen on the basis of initial talks with key persons and were selected for their participation in the learning network or labor network. All interviews were based on a topic list, were taperecorded and lasted sixty to ninety minutes. During the interviews, respondents were also asked to report troublesome situations regarding learning (or critical incidents) they had experienced. With respect to each critical incident, respondents were asked to both give a description (who was involved, what happened) and interpretation of the situation. After the interviews a member check was done (Wester, 1991). This means that a summary was sent to each respondent for correction and confirmation. All the respondents returned these summaries. Organizational documents were collected on departmental and organizational level. These documents varied from organizational charts and annual reports, to educational policy plans.

Analysis The analysis of the interviews was done with the help of a computer program for qualitative data analysis, called Kwalitan (Peters en Wester, 1990). In the analysis, two phases can be

Results

	Organization A *two departments*	Organization B *two departments*	Organization C *one department*
LABOR NETWORK Content Structure of Work	task work	a mix of task work and group work	group work
LEARNING NETWORK Content Structure - Formal learning activities	Task oriented: -product quality training -individual development program -ergonomic training -newcomers' training	Task oriented: -product quality program -machine control program -newcomers' mentorship program Social oriented: -work conference -outdoortraining	Task oriented: -newcomers' program -team exchange program -special programs on f.e transport Social oriented: -team training -conversation techniques program -work conference -teamcoordinators' program
- Informal Learning activities	Task oriented: -feedback from colleagues to colleagues	Task oriented: -asking questions to colleagues Social oriented: -feedback from the manager to workers	Task oriented/Social oriented: -discussion of progress Social oriented: -feedback from teamcoordinator to workers
Organizational Structure	Main responsibility: -personnel department	Main responsibility: -manager	Main responsibility: -personnel department
Critical Incidents	*'At a given time I attended a course on English conversation. I travelled to this course in my own time. Colleagues considered this stupid. They said: 'You should not do this' (Employee)*	*'I know a boy who has worked here for five years on a certain machine. When I just started to work here I asked him what he was producing. He replied: 'I don't know'. Can you imagine that you have worked here day in, day out for five years, and don't even know what you are producing!' (Allrounder)*	*'In my team we had a problem concerning education. An allrounder was forced to attend a course in order to control a machine. This person refused because he already controlled this machine in his daily work. In the end, the person did not have to attend this course' (Teamcoordinator)*

Table 1: Description of the labor and learning network of the three organizations

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distinguished. First, the analysis was focused on a description of the content structure of the labor network, the content and organizational structure of the learning network, and the critical incidents reported in the five departments. As a result of the similarities of the departments within the same organization, final descriptions were made on the organizational level. Second, the description of the learning networks and of the critical incidents was analyzed in terms of the embedded norms and values regarding learning.

Labor Network The description of the labor networks of the three organizations is summarized in Table 1. In organization A, the content structure of work can be characterized as task work. Production workers perform small simple tasks, which are highly specialized. In organization B, the content structure of work can be characterized as a mix of task work and group work. Production workers perform simple tasks. Next to that, a special task force of workers is formed to support the production activities at the workplace. In organization C, the content structure of the work can be characterized by group work. Production workers work together in teams in which task roulation takes place. In each team one production worker, the teamcoordinator, coordinates the production processes and group processes.

Learning Network The description of the learning networks of the three organizations is summarized in Table 1. In organization A, the content structure of the learning network consists of the following four, task oriented, formal learning activities: a product quality training, an individual development program, an ergonomic training and a newcomers' training. Also, one informal learning activity is distinguished. This learning activity is task oriented and is related to the ergonomic training: workers give feedback to each other if they do not perform their work activities in an ergonomical way.

In organization B, the content structure of the learning network consists of five formal learning activities and two informal learning activities. In the formal learning activities, three task oriented learning activities and two social oriented learning activities can be distinguished. The three task oriented learning activities are: a product quality program, a machine control program and a newcomers' mentorship program. The two social oriented learning activities are: a workconference and an outdoortraining. The two informal learning activities are task oriented and social oriented. The task oriented learning activity relates to workers who ask colleagues questions when they want to perform new work activities. The social oriented learning activity relates to the feedback the manager gives to his workers when he thinks they do not take the responsibility for their work activities.

In organization C, the content structure of the learning network consists of seven formal learning activities and two informal learning activities. In the formal learning activities, three task oriented learning activities and four social oriented learning activities can be distinguished. The three task oriented learning activities are: a newcomers' program, a team exchange program and special programs (e.g., on transport).

The four social oriented learning activities are: a team training, a conversation techniques program, a work conference and a team coordinator program. The two informal learning activities are task oriented and social oriented. The first informal learning activity is related to the discussion of teamworkers in teammeetings about the progress that is being made within their team. This learning activity is both task oriented and social oriented. The second informal learning activity refers to the feedback the teamcoordinator gives to this workers when they lack responsibility towards their work activities. This learning activity is social oriented.

The organizational structure of the learning network of the three organizations can be characterized as top down. The main responsibility regarding the learning of production workers is taken by the personnel department (organization A and C) or by the manager (organization B).

Critical Incidents In Table 1, critical incidents are described with respect to each organization. Because of the limited space, only three critical incidents are described. In the original case study, a total of six critical incidents were collected: one in organization A, two in organization B and three in organization C. The critical incidents mentioned in Table 1 are considered to be most representative for the learning climate of the three organizations.

In the critical incident of organization A, an employee remarks that her colleagues considered it stupid that she traveled in her own time in order to attend an English conversation course. In the critical incident of organization B, an allrounder refers to an incident that happened when he just started working in the department. At a certain occasion he asked a colleague to explain what he was producing. This colleague replied: 'I don't know'. In the critical incident of organization C, a team coordinator mentions an incident that took place in his department some time ago. In this incident an allrounder was forced by the personnel department to attend a course in order to learn to control a specific machine. Because the allrounder already controlled this machine in his daily work, he refused to go. In the end, the allrounder did not have to attend the course.

Norms and values embedded in the learning networks In the content structure of the learning network of organization A, three norms are embedded. The first norm is that 'the content of learning activities should be focused on work processes'. This norm is expressed in all the learning activities mentioned in Table 1. The product quality training, the ergonomic training, the newcomers' training and the feedback from colleagues regarding ergonomic disapproved behavior are all focused on the optimalization of work processes. The second norm embedded in the content structure is that 'workers should attend learning programs at the same time and at the same level'. This norm is expressed in the way workers attend the product quality training and the ergonomic training. The product quality training takes place in a classroom, while the ergonomic training is situated at the workplace. Both learning programs are attended by all workers at the same time and no differentiation is made between workers. The third norm embedded in the content structure is that 'individuals who want to develop themselves within the organization should be supported'. This norm is expressed in the individual development program. In this program, individuals who want to develop themselves within the organization are financially supported in order to attend courses. In the organizational structure of the learning network of organization A, the following norm is embedded: 'Initiatives regarding learning should be taken top down'. This norm is expressed in the way the personnel department takes the main responsibility regarding the learning of production workers.

Underlying the above mentioned norms are the following values regarding learning: uniformity, control and individuality. The value uniformity is expressed in the norm that 'workers should attend learning programs at the same time and at the same level'. The factor underlying this norm is that it is valued that workers learn in a uniform way. The value control is expressed in the norm that 'initiatives regarding learning should be taken top down'. This norm suggests that the control of workers' learning is aimed for. The value individuality is expressed in the norm that 'individuals who want to develop themselves within the organization should be supported'. This norm expresses that individuality regarding learning is valued.

In the content structure of the learning network of organization B and organization C, two norms are embedded. The first norm is that 'the content of learning activities should be focused on work processes and social processes'. This norm is expressed in the formal learning activities and informal learning activities mentioned in Table 1. In organization B, the product quality program, the machine control program, the newcomers' mentorship program, and workers asking questions to colleagues regarding work are alle focused on the optimalization of work processes. In organization C, the following learning activities are focused on work processes: the newcomers' program, the team exchange program, and the special programs (e.g., transport). Other learning activities are focused on the optimalization of social processes. In organization B, these learning activities are: the workconference, the outdoortraining and the feedback from managers to workers with respect to taking the responsibility for their own work activities. In organization C, these learning activities are: the team training, the conversation techniques program, the work conference, the teamcoordinators' program, and the feedback from the teamcoordinators to workers with respect to taking the responsibility for their work activities. The second informal learning activity mentioned with respect to organization C in Table 1, in which teamworkers discuss about the progress that is being made in their team, can be regarded as being focused on both the optimalization of work processes and the optimalization of social processes. The second norm embedded in the content structure is that 'workers should attend learning programs on the basis of their function level'. In organization B, this norm is expressed in the outdoortraining, which is only attended by workers who participate in the task force. In organization C, this norm is expressed in the attendance of workers to the team exchange program, the special programs, the conversation techniques program and the teamcoordinators' program. Attendance of these programs is allowed if workers perform or start to perform a specific function. In the organizational structure of the learning network of organization B and organization C, the norm that 'initiatives regarding learning should be taken top down' is embedded. This norm is expressed in the way the manager (in organization B) and the personnel department (in organization C) take the main responsibility regarding the learning of production workers.

Underlying the above mentioned norms are the following values regarding learning: differentiation and control. The value differentiation is expressed in two norms. First, the norm that 'the content of learning activities should be focused on work processes and social processes'. Second, the norm that 'workers should attend learning programs on the basis of their function level'. Both norms express that it is valued that the content of learning is differentiated. The value control is expressed in the norm that 'initiatives regarding learning should be taken top down'. This norm suggests that the control of workers' learning is aimed for.

Norms and values embedded in the critical incidents In the critical incident of organization A, two norms regarding learning are confronted. On the one hand, the norm of the colleagues who consider it stupid to travel in your own time in order to attend a course. They think that learning should take place during working hours. On the other hand, the norm of the employee. She considers it legitimate to travel in her own time, because she experiences it to be in her own interest. She hopes that this effort will contribute to a career within the organization.

In the critical incident of organization B, also another two norms are confronted. First, the norm of the colleague who considers it not important to know (or learn) about what he is producing. Second, the norm of the newcomer who considers it important to ask questions in order to learn about his work.

In the critical incident of organization C, two norms regarding learning are confronted. On the one hand, the norm of the personnel department. They consider it important that the allrounder fullfills the educational demands which are related to his function level. The allrounder, however, is convinced of the fact that it is of no use to attend a course when you are already familiar with the content. His norm is that you should learn when there is a need to learn.

Relationship between critical incidents and learning climate With respect to the relationship between the critical incidents and the learning climate, three remarks can be made. First, the findings show that critical incidents provide insight into the socialization of workers, and especially newcomers, with respect to learning. This socialization effect is shown in the critical incidents of organization A and organization B. In the critical incident of organization A colleagues force a worker to obey to their norm that 'you should learn during working hours'. In the critical incident of organization B, a newcomer is implicitly told that 'it is not important to learn about your work'. Second, critical incidents show the tension that can exist due to a particular learning climate. This is shown in the critical incident of organization C. This incident makes clear the tension between a worker who does not want to attend a course and the personnel department who wants him to go. This tension can be regarded as the result of the developments in the content of work within this organization. In organization C group work is developed. A value underlying group work is that workers are responsible for their work. As a result of this growing responsibility regarding work, the worker probably experiences more responsibility for his learning as well. This is expressed in his opinion that 'you should not attend a course if you are already familiar with the content'.

Two types of learning climate On the basis of a comparison of the norms and values embedded in the learning networks of the three organizations, two types of learning climate are distinguished: a standardized, mechanical learning climate and a differentiated, mechanical learning climate. The standardized, mechanical learning climate is characterized by the following norms:
- the content of learning activities should be focused on work processes
- workers should attend learning programs at the same time and at the same level
- initiatives regarding learning should be taken top down

Values underlying these norms are: uniformity, control and individuality.
The differentiated, mechanical learning climate is characterized by the following norms:
- the content of learning activities should be focused on work processes and social processes
- workers should attend learning programs on the basis of their function level
- initiatives regarding learning should be taken top down

Values underlying these norms are: differentiation and control.

Both types of learning climate are related to the content structure of work. The standardized mechanical learning climate is related to task work, while the differentiated, mechanical learning climate is related to group work.

Conclusion

The results of the present study confirm the assumed relationship between the learning climate and the content structure of work (Van der Krogt, 1995). An intriguing aspect of this study, however, is that the learning climate of group work departments is less focused on values as innovation and creativity than would be expected from the literature (Trist, Higgins, Murray & Pullock, 1963; DeSitter, 1994). An explanation of this finding is that the development in the learning climate of departments makes slower progress than the development of labor. Another explanation is that the development of group work is less progressive than it is assumed to be. This explanation is consistent with a recent study on the development of group work in organizations (Fruytier, 1994).

In future research it would be interesting to explore the prevalence of learning climates in which creativity and innovation are valued. Question is whether this type of learning climate is found in group work, or that it appears in, for instance, adhocratic work (Mintzberg, 1983).

Contribution to new knowledge in HRD

This study provides guidance to HRD professionals in diagnosing the learning climate in their organization. A theoretical framework is described in order to look at the education of employees from a contextual perspective. Besides, a case study method is developed to diagnose the learning climate in organizations.

References

Argyris, C., & Schön, D. (1978). *Organizational learning: a theory of action perspective.* Reading, Mass.: Addison Wesley.

DeSitter, L.U. (1994). *Synergetisch produceren* [Synergetic producing]. Assen: Van Gorcum.

Flanagan, J.C. (1954). The critical incident technique. *Psychological Bulletin*, 51, 327-355.

Gundry, L.K., & Rousseau, D.M. (1994). Critical incidents in communicating culture to newcomers: the meaning is the message. *Human Relations*, *47* (9), 1063-1088.

Fruytier, B. (1994). *Organizatieverandering en het probleem van de Baron van Münchhausen* [Organization development and the problem of baron von Münchhausen]. Dissertation. Delft: Eburon.

Krogt, F.J. van der (1995). *Leren in netwerken* [Learning in networks]. Utrecht: Lemma.

Miles, M.B. & Huberman, M. (1994). *Qualitative data analysis: an expanded sourcebook.* Beverly Hills: Sage Publ.

Mintzberg, H. (1983). *Structures in fives.* Englewood Cliffs: Prentice Hall.

Peters, V., & Wester, F. (1990). *Qualitative analysis in practice: Including user's guide Kwalitan version 2.* Nijmegen: University of Nijmegen, Department of Research Methodology.

Taylor, F.W. (1964). *Scientific management.* London: Harper & Row.

Trist, E.L., Higgins, Murray & Pullock (1963). *Organizational choice: capabilities of groups at the coal face under changing technologies.* London: Tavistock Publ.

Wester, F. (1991). *Strategieën voor kwalitatief onderzoek.* [Strategies for qualitative research]. Muiderberg: Coutinho.

An Examination of the Dimensionalities and Theoretical Framework of the Gregorc Style Delineator

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The purpose of this study was to examine the dimensionalities and construct validity for the Gregorc Style Delineator using exploratory and confirmatory factor analyses and to test the hypothesis of Gregorc's channel theory as deployed and represented by the instrument. The measurement structures yielded did not support the Gregorc Style Delineator's theory, design, scoring method, and accurate portrayal of one's cognitive learning style.

Even though widely used, is the Gregorc Style Delineator a valid and reliable learning style instrument? Does it measure Gregorc's four channels of how the mind receives and expresses information as proposed by its author (Gregorc, 1984)? Due to its simplicity of design and ease of interpretation, the Gregorc Style Delineator continues to be widely used and accepted as a learning style instrument even though its construct validity has been questioned (O'Brien, 1990; Joniak & Isaksen, 1988). Furthermore, the instrument was included in the Twelfth Edition of the Mental Measurement Yearbook with a mixture of criticism and acclaim (Ferro, 1996).

Regardless of the theoretical basis, the actual measurement of learning style has been problematic (D'Amato, 1992; Gregg, 1989; Bonham, 1987 & 1988; and Curry, 1983). For any learning style instrument to be useful, it must consistently and accurately measure and be able to represent its theoretical conceptualization; does it measure what it is intended? If an author designs a subset of questions (or items) which are intended to represent by their cumulative and unique scores specific traits, characteristics, or styles, then those intentionally related questions should be empirically related to each other (in a correlational comparison) and as a group represent the trait (construct) their relationships are intended to measure. Conversely, they should not be related to other items on the test which are intended by the author to represent different attributes or styles.

The purpose of this study was to examine the dimensionalities and construct validity for the Gregorc Style Delineator using exploratory and confirmatory factor analysis and to test the hypothesis of Gregorc's channel theory as deployed and represented by the Gregorc Style Delineator. The Style Delineator was not developed using empirically rigorous, psychometric methods of test construction and analyses, neither factor-analytic, discriminant, or any other multivariate methods. Since the Gregorc Style Delineator, in spite of these profound developmental shortcomings, is widely deployed and used by educators and trainers world-wide, it is important that the instrument's reliability and construct validity be tested and reported. The Gregorc Style Delineator's internal consistency should be examined and its internal factor structure compared to the intended dimensions of its theoretical framework.

The Gregorc Style Delineator: Theoretical Constructs and Design

Using a phenomenological method to develop a self-analysis tool during his years as a director of a school laboratory, Gregorc (1984) created the Gregorc Style Delineator. This qualitatively designed and developed instrument was intended to identify four separate and distinct channels which the mind receives and expresses information (Gregorc, 1984). These channels were based, theoretically, on two types of mediation abilities of the mind related to perception and ordering. Each of these two channels are comprised of separate bi-polar qualities labeled *abstract-*

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concrete and *random-sequential* respectively. However, the instrument's individual items were purposely designed, according to Gregorc (personal communication, October 28, 1994), only to measure and represent the composite channels and not their separate qualities. According to Gregorc (1982), the coupling of these qualities were theoretically merged and built within his test construction as four distinct and separate transaction ability channels labeled: Concrete/Sequential (CS), Abstract/Sequential (AS), Abstract/Random (AR), and Concrete/Random (CR). In other words, the separate word-items on the instrument's scales are not intended to measure or represent separate qualities such as Concrete or Random or Sequential or Abstract, but theoretically already represent their composites in four separate unions of dimensions or channels (CS, CR, AS, and AR). These special words and word-phrases are phenomenologically derived and supported by over ten years of qualitative research, interviews, case studies and personal experiences (Gregorc, 1982). This distinction is important when analyzing the Style Delineator. Many other instruments are designed to measure the individual items separately, then add combinations together to reach a composite construct, such as the Hardy Educational Learning Profile (Hardy & Hardy, 1998).

In measuring learning style, the Gregorc's channels are represented by the total scores on each channel's scale. The instrument is comprised of 40 items of rank-ordered choices which can be quickly scored. Respondents rank their preferences within each cluster. The rank-order choices are summed by design in accordance to Gregorc's channel theory into four basic channels into a profile depicting a relative order of magnitude representing one's preferred style or styles.

Our Expectations. Since the Gregorc Style Delineator was constructed using 40 psychological laden and derived words or phrases which each group of ten represent one of four composite channels, in our analyses it was expected that exploratory factor item analyses would reveal the four factors consistent with its theoretical channel constructs. The factor structure would be expected to display an orthogonal structure of four factors as separate dimensions. Additionally, we felt that the previous tests of the instrument's dimensionality and robustness had not gone far enough in involving in-depth analyses of the expected internal structures in relation to theory and the actual linear relationships represented in the data set respective of theoretical constructs or channels. Nor have previous studies confirmed Gregorc's theoretical framework which we felt was Gregorc's major contribution to the field of learning style. This study reports a series of factory analyses and attempts to build a confirmatory model for the examination of its dimensions in regard to a diverse sample of adults.

Method

Sample and Data Analyses Sample size requirements were driven by recommended factor analytic conventions in regard to subject to variable ratios and minimum size of samples. It is generally recommended that an adequate or 'rule of thumb' ratio to be at least five cases per variable and a minimum sample size to be 200 (Kline, 1993; Tabachnick & Fidell, 1989). To analyze the Gregorc Style Delineator's 40 items, a total sample of 467 adults was obtained. The total sample (467) was comprised of 187 graduate-level adults in adult education, counseling education in a major university, program management classes at a large government educational institution, and several workshops for professional educators in the Washington D.C. metropolitan area. An additional sample of 280 college faculty and working adult professionals in undergraduate business classes at a Northern Virginia college were obtained. To test factor structure stability each sample yielded similar structures, so we felt comfortable to achieve a larger "n" to pool the samples. This aggregate sample yielded a stable structure and was replicated regardless of extraction method (Tabachnick & Fidell, 1989).

All analyses were supported using EXCEL 4.0 (Microsoft) for data input and data management. A total of 467 protocols were coded and entered into data sets in spread sheet formats. Names and other identifications besides demographic information were not collected or recorded. Data sets were exported into several statistical packages - JMP, SPSS, StatView 4.1 (Abacus) for internal reliability, principle component and factor analyses and EQS for confirmatory factor analyses.

Psychometrics In order to adequately examine the Gregorc Style Delineator, the analyses performed in this study followed very deliberate conventions: demographic frequency distribution analysis, an internal reliability analysis (Cronbach alpha); an examination of the correlation matrix for factorability; a principal component analysis (PCA) for initial factor extractions; and after a scree test was used to help determine the number of factor to retain, an iterative or common factor analysis for the final extraction, factor stability comparisons, and possible theoretical interpretation. Additionally, confirmatory factor analysis or linear structural equation modeling could be used for specifying, estimating, and testing hypothesized interrelationships matching theory to the instrument (Bentler, 1995). The theoretically expected factors and relationships which are confirmed by the analyses would help to validate the instrument and its theoretical basis (Kerlinger, 1986).

For all non-singular matrixes, a Barlett's significance test was performed with a $p < .05$ desired. This procedure tests the number of factors and evaluates all factors together and each factor separately against the null-hypothesis that there are no factors. Additionally, a communality of factors to variables was examined to determine the amount of variance accounted for by the factors. In all cases, simple solutions were sought seeking stable structures using either orthogonal or oblique rotations. (Kline, 1993 and Tabachnick & Fidell, 1989). A Second Order Factor Analysis was also conducted to explore and support the related oblique constructs which the earlier EFA's seemed to yield. We intended to investigate the interrationhips of Gregorc's original heuristic theoretical model and our Second Order EFA model to build the models to test whether or not the instrument's linear interrelationships within the sample data set tend to confirm the predicted relationships of the structural models.

A good measure of one's learning style as profiled by a questionnaire or survey should consistently and accurately measure its conceptualization. For reliability, regardless whether it is split-half, test-retest, or Cronbach Alpha, one general rule of thumb and accepted convention requires an instrument to have a reliability standard of greater than .70. In regard to measures of validity, when factor analyzed (or other methods of structure analyses) related items should tend group together in the intended dimension and direction as might be reasoned and theoretically anticipated. If the questions or items do not, then what the instrument actually measures is questionable and should be only be used with caution (Nunnally and Berstein, 1994; and Kline, 1993). Factor loadings of .30 or higher on a factor were considered interpretable and .40 or higher were considered salient. The greater the loading the more the variable is a pure measure of the factor and can be useful as a marker variable in the analysis to help define the factor (Nunnally and Berstein, 1994; and Tabachnick & Fidell, 1989). In a confirmatory model, goodness-of -fit indices (CFI) are expected to be .90 or greater (Bentler, 1995). Factor analysis has been widely used and accepted by instrument developers and psychometricians as a construct validity tool (Kline, 1993). Nunnally (1994) and Kline (1993) are critical of instruments which have not been factor analyzed or do not exhibit adequate factor structures when they have been studied in this manner.

Earlier Quantitative Studies. Joniak and Isaksen (1988) attempted to examine the instrument's internal structure using a principle component analysis. Their analysis did not yield evidence of the construct validity of Gregorc's channels. O'Brien's (1990) later analysis yielded minimal structural definition and also did not support the instrument's theoretical constructs. With the exception of Joniak and Isaksen (1988) and O'Brien (1990), all other psychometric analyses have been limited only to Gregorc's (1984) initial minimal assessments made during the instrument's early development in which Gregorc interviewed several hundred subjects. He compared Style Delineator scores with an untested scale of self-assessment agreement which was intended to record the face validity of the instrument for each individual (or the instrument results verses an individual's subjective agreement that their learning style profile tends to fit them). These correlations of the instrument general results and the subjective rated agreement attributes were reported to be between .55 and .76. This specious method alone was used again in a subsequent comparative analysis by the author (Gregorc, 1984) and also yielded "positive" results--29 % strongly agreeing, 57 % agreeing, 14 % unsure, and none disagreeing.

Results

Internal Reliability In this study, internal reliability coefficients (Cronbach Alpha, n = 467) on all scales or channels and ranged from .54 to .68. These reliability coefficients were consistent with those reported by O'Brien (1990) and Joniak & Isaksen (1988) which respectively ranged from .51 to .64 and .23 to .66 on all scales. Gregorc (1984) has advertised much higher reliability data with test-retest correlation coefficients of .85 to .88 and standardized alpha coefficients of .89 to .92 on all scales.

Factor Analyses Since earlier studies were inconclusive in regard to adequately probing and interpreting Gregorc's theoretical dimensions in relationship to the instrument's internal structures, our own investigations sought interpretable structures in relation to theory or in relation to a factor analytic-yielded, stable structure (an underlying structure can be obtained by more than one run or extraction method seeking a persistence of structure and a simple solution, which Thurstone (1947) defined as a factor solution having as high a correlation as possible between variables loading on individual factors, while not loading on other factors).

Principal Component Analyses. Our initial PCA's revealed similar and stable structures regardless of sample decomposition used (187, 280, or 467). Using a Varimax orthogonal rotation to produce the final PCA structure from the aggregate sample of 467, the following represents the interesting and a potentially interpretable structure (eigenvalues of 5.7, 3.0, 2.5, and 2.7 accounting for only .34 of the variance) which tended to be consistent across samples:

Nine of the ten items from the "AR" scale of the instrument clearly loaded inversely on the first factor (-.33 to -.69).

Four of the ten items from the "AS" scale of the instrument loaded positively on the first factor (.32 to .54) and five loaded on the third factor (.34 to .60).

Six of ten from the "CR" scale of the instrument loaded on the second factor(.36 to .51) and four inversely loaded on the third factor (-.32 to-.59).

The "CS" scale of the instrument loaded on the first factor (.32 to .49) and five inversely on the second (-.38 to -.61) factor.

Iterative Factor Analysis. As a result of the above PCA extractions (and for a final check of factor stability), an iterative or common Factor Analysis (FA) was performed, specifying four factors (due to the scree plot results) using an oblique rotation (seeking an improved solution due to the relative promiscuity of the variable complexity ratio of 1.89) which yielded similar results but allowed for a follow-on second order factor investigation. Four factors were extracted having the same eigenvalues to the previous PCA: 5.7, 3.0, 2.5, and 2.7 and still only accounting for over .34 of the total variance. A modest but relatively consistent structure to the PCA emerged:

Five of the ten items from the "AR" scale of the instrument clearly loaded inversely on the first factor (-.43 to -.61) and the fourth factor (-.35 to -.64),

Seven of the ten items from the "AS" scale of the instrument loaded positively on the first factor (.30 to .53) and five loaded on the third factor (.33 to .58).

Seven of ten from the "CR" scale of the instrument loaded on the second factor(.30 to .56) and six inversely loaded on the third factor (-.31 to -.57).

Seven of ten from the "CS" scale of the instrument loaded on the fourth factor (.31 to .58) and six inversely on the second (-.31 to -.60) factor.

Variable complexity (cited above - how many factors are measured by each test item, a value of near "1" is desirable) averaged 1.84 per test item. See Table 1 below:

Table 1

Iterative or Common Factor Analysis, 4 Factors, Gregorc Style Delineator

Items	Factor 1	Factor 2	Factor 3	Factor 4
AR-Aesthetic	0.02	0.05	0.08	**-0.64**
AR-Attuned	-0.13	-0.08	-0.23	**-0.44**
AR-Aware	0.05	**-0.40**	0.06	**-0.35**
AR-Colorful	**-0.47**	0.09	0.03	-0.29
AR-Empathy	-0.25	-0.13	-0.06	**-0.63**
AR-Lively	**-0.61**	0.22	**0.33**	-0.14
AR-Nonjudgmental	-0.08	0.03	0.09	**-0.42**
AR-Person-oriented	**-0.43**	-0.27	-0.15	-0.02
AR-Sensitive	**-0.61**	-0.15	0.06	-0.29
AR-Spontaneous	**-0.56**	**0.38**	0.14	-0.25
AS-Analytical	**0.47**	-0.10	0.02	0.28
AS-Evaluative	**0.35**	0.05	**0.34**	0.09
AS-Ideas	-0.03	**0.47**	0.16	0.13
AS-Judge	**0.31**	-0.01	**0.36**	-0.05
AS-Logical	**0.38**	-0.14	0.16	0.22
AS-Proof	-0.01	0.01	**0.59**	-0.03
AS-Quality	-0.19	-0.01	**0.33**	**0.38**
AS-Rational	**0.53**	-0.15	0.08	-0.04
AS-Referential	**0.30**	0.01	**0.58**	-0.06
AS-Research	**0.46**	-0.02	0.13	-0.01
CR-Creative	-0.21	**0.47**	**-0.34**	0.09
CR-Experimenting	-0.26	**0.56**	-0.03	0.00
CR-Innovative	-0.06	**0.41**	**-0.50**	0.18
CR-Insightful	0.12	0.16	**-0.57**	**-0.30**
CR-Intuitive	0.01	0.07	**-0.57**	-0.17
CR-Multisolutions	-0.02	**0.47**	**-0.31**	0.13
CR-Perceptive	-0.07	0.07	**-0.55**	-0.21
CR-Practical dreamer	-0.15	**0.31**	-0.26	**-0.31**
CR-Risk-taker	0.06	**0.46**	-0.16	0.00
CR-Troubleshooter	0.26	**0.30**	-0.19	-0.16
CS-Careful detail	0.20	**-0.48**	0.15	0.12
CS-Objective	**0.32**	0.06	0.18	**0.40**
CS-Ordered	0.15	**-0.42**	0.02	**0.31**
CS-Perfectionist	-0.02	**-0.50**	-0.01	0.26
CS-Persistent	-0.23	**-0.48**	-0.07	**0.32**
CS-Practical	0.19	-0.15	0.14	**0.40**
CS-Product oriented	**0.30**	-0.06	0.08	**0.37**
CS-Realistic	0.07	**-0.31**	0.06	**0.58**
CS-Solid	0.12	-0.18	0.20	**0.41**
CS-Thorough	-0.05	**-0.60**	-0.10	0.21

Note: Prefixes represent Gregorc constructs or channels: AR is Abstract Random, AS is Abstract Sequential, CR is Concrete Random, and CS is Concrete Sequential. **Bold values: Interpretable .30 or larger, .40 or larger are Salient.**

Second Order EFA. Consistent with previous studies, the above factor structure did not cleanly support the expected four separate factors or constructs (or channels). However, it did provide some interesting structures to probe and some evidence due to the observed inverse loading of possible bipolar relationships in Gregorc's theoretically expected directions between "AR" and "CS" as well as "CR" and CS" (presumably the "R and S"). Using the factor scores from the above analysis, a second order factor analysis was conducted which generally supported the *interpretable* structure. An oblique rotation produced two second order factors (I and II) with eigenvalues of 1.3 and .9 which accounted for .57 of the variance. First order Factors 1, 2, and 4 loaded respectively on Factor I , .63, .81 and .43, and first order Factor 3 loaded on Factor II, .95.

Table 2.
The Results of the EFA's and the Instrument's Internal Structure

Second Order EFA			
Factor I	Factor I	Factor II	(Factor I)
Iterative Common EFA			
Factor 1 (AS - AR)	Factor 2 (CR - CS)	Factor 3 (AS - CR)	Factor 4 (CS - AR)
+ AS Analytical	+ CR Creative	+ AS Proof	+ CS Objective
+ AS Rational	+ CR Experimenting	+ AS Referential	+ CS Practical
+ AS Research	+ CR Innovative	- CR Innovative	+ CS Realistic
- AR Colorful	+ CR Multisolutions	- CR Insightful	+ CS Solid
- AR Lively	+ CR Risk-taker	- CR Intuitive	- AR Aesthetic
- AR Person-Orien	+AS Ideas**	- CR Perceptive	- AR Attuned
- AR Sensitive	- CS Careful detail		- AR Empathy
- AR Spontaneous	- CS Ordered		- AR Nonjudgmental
	- CS Perfectionist		
	- CS Persistent		
	- CS Thorough		
	- AR Aware**		

Note: Prefixes represent Gregorc constructs or channels: AR is Abstract Random, AS is Abstract Sequential, CR is Concrete Random, and CS is Concrete Sequential.

Iterative EFA Structure: Factor 1 explained by possible bipolar relationships of Sequential (S) and Random (R) items while controlling for Abstract(A) items and Factor 2 explained by Concrete(C) items. Also, the theoretical separate Channels AS, CR, CS, & AR loaded on Factor 1 and 2 in dimension and direction expected) Theoretical Separate Channels AS, CR, CS, & AR loaded on Factor 3 and 4 in dimension and direction expected in regard to Gregorc's conceptionalizations)

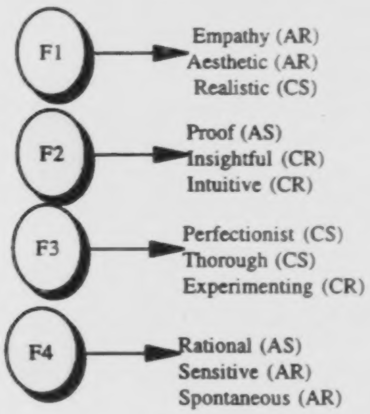
Second order Factor I was primarily comprised of Factors 1 and 2, and marginally by 4; and second order Factor II represented Factor 3.

Only 33 of Gregorc's 40 items above are .40 or greater (from Table 1). Seven items which were judged to be not salient or related to any factor: AS-Evaluative, AS-Judge, AS-Logical, AS-Quality, CR-Practical dreamer, CR-Troubleshooter, and CS-Product oriented. Though not designed by Gregorc, "**" items could be semantic-related to other Factor 2 items.

Gregorc's four theoretically separate orthogonal channels or constructs were not clearly depicted or supported by the analysis and in the above structures.

Confirmatory Factor Analysis. Since the EFAs did not provide supporting structural evidence for Gregorc's four channels or constructs, we had to use the factor structures in Table 1 and 2 to determine a model to test and try to support his four channels theory. We selected the three marker variables (each loading above .50 on each factor) as most representative of the four factors consistently identified in our preceding solutions. In the structural model, Factor 1 would be represented by AR Empathy, AR Aesthetic, and CS Realistic; Factor 2 represented by AS Proof, CR Insightful, and CR Intuitive; Factor 3 represented by CS Perfectionist, CS Thorough, and CR Experimenting; and Factor 4 by AS Rational, AR Sensitive, and AR Spontaneous. Using a maximum likelihood extraction, we tested the above hypothesized model, though not cleanly representative of Gregorc's instrument, one could suggest that it could support, thus test his four-channel theory. To our disappointment, our CFA model would not yield, regardless of our best efforts, an acceptable CFI (comparative or goodness of fit index) in comparing our constructed and hypothesized model with the linearalized interrelationships in our test sample of 467 adults.

Table 3.
Proposed CFA Model for the EFA Derived Framework



Conclusions

The instrument's internal reliability coefficients were lower than Gregorc reported on all scales. In examining the internal factor structure of the Gregorc Style Delineator for evidence of the construct validity of Gregorc's four separate channels, none of the scales had high enough loadings to qualify variables as marker variables (near pure representations of the factors). These modest relationships (.30 to -.64) and dimensionalities tended to lack a clear definition between the composite constructs or channels with each other. Consistent with Joniak and Isaksen (1988) and O'Brien (1990), the Gregorc Style Delineator did not display a clear enough structure to validate the instrument's measurement and confirm Gregorc's theoretical interpretation of four learning style channels. However, this study did probe into Gregorc's theoretical conceptualizations. In our analyses, the instrument's most definable characteristic in regard to its internal oblique structure and somewhat explained by the second order EFA was the bipolar and inverse relationships (depicted in Table 1) which, if one ignores the overall internal structures, could be theoretically consistent both in dimension and direction. The second order factor analysis tended to support these interesting interrelationships. However even if one ignores the items loading below .40, one could not effectively argue that the residual items and expressions which comprise these interrelationships might even modestly represent four *different* dimensions or channels of cognitive style as theoretically posited by Gregorc and purported to by measured by the Delineator. For example, the AS items did not load (were not related together) on one dimension, but split loaded on Factor 1 and 3. One can readily observe that the other three channels' salient items were also split. Our attempt to confirm the factor structure and to test an hypothesized channel model of Four factors supported by 12 variables, did not support Gregorc theoretical framework. Additionally, the instrument's average variable complexity ratio of 1.84 also indicated this lack of definition between the factors (reiterating that average item tends to be related to two different factors or channels). Thus, the aggregate values tabulated when one takes the instrument do not correspond with the "relatedness" evidence of the items representing the separate channels. This could result in an inaccurate representation of one's preferred cognitive style.

The current instrument design and scoring does not support and is not in alignment with the measurement structures yielded from this sample of adults and depicted in our analyses. If these analyses are not unique to this population and these results are indicative of the instrument's general robustness, then Gregorc should consider amending his instrument and replacing suspect and spurious items with better representative ones which are in more alignment with his channel theory and his scoring methodology with its resulting profile.

References

Bonham, L. (1987). Theoretical and practical differences and similarities among selected cognitive and learning styles of adults: An analysis of the literature. Unpublished doctoral dissertation. Department of Adult Education, University of Georgia.

Bonham, L. (1988). Learning style instruments: let the buyer beware. Lifelong learning, 11. (6), 12-16.

Bentler, P. (1995). EQS structural equations program manual. Encino, CA: Multivariate Software, Inc.

Curry, L. (1983). An organization of learning styles theory and constructs. Annual meeting of the american educational research association, 67th, Montreal, Quebec. April 11-15, 1983.

D'Amato, R. (1992). The Hermann brain dominance instrument. In Kramer J. & Conoley J. (Eds.) The eleventh mental measurements yearbook. (pp. 377-378). Lincoln, Nebraska: The University of Nebraska Press.

Ferro, T. (1996). Gregorc style delineator. In Conoley, J. and Impara, J., (Eds.) The twelfth mental measurements yearbook. Lincoln, Nebraska: The University of Nebraska Press.

Gregg, N. (1989). Learning-style inventory. In Conoley, J. & Kramer, J. (Eds.) The tenth mental measurements yearbook. (pp. 441-442). Lincoln, Nebraska: The University of Nebraska Press.

Gregorc, A. (1979). Learning /teaching styles: Potent forces behind them. Educational leadership. 234-236.

Gregorc, A. (1984). Gregorc style delineator: Development, technical, and administrative manual. Columbia, CT: Gregorc Associates, Inc.

Hardy, C. & Hardy, S. (1998). What's your learning style: Hardy educational learning profile (HELP). 1998 McGraw-Hill performance and training source book. New York: McGraw-Hill.

Joniak, A. & Isakson, S. (1988). The Gregorc style delineator: Internal consistency and its relationship to Kirton's Adaptive-Innovative distinction. Educational and psychological measurement, 48. 1043-1049.

Kerlinger, F. (1986). Foundations of behavioral research. (3rd ed.). Fort Worth, TX: Holt , Rinehart, and Winston, Inc.

Kline, P. (1993). The handbook of psychological testing. London: Routledge.

Nunnally, J. and Berstein, I. (1994). Psychometric theory. New York: McGraw-Hill.

O'Brien, T. (1990). Construct validation of the Gregorc style delineator: an application of LISREL7. Educational and psychological measurement, 50. 631-636.

Tabachnick, B. and Fidell, L. (1989). Using multivariate statistics, (2nd ed., pp. 597-641). Northridge CA: Harpers Collins Publishers.

Thurstone, L. (1947). Multiple factor analysis. Chicago: University of Chicago Press.

The Effect of a Mastery Practice Design on Learning and Transfer in Behavior Modeling Training of Supervisory Listening Skills

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This study drew from research in the cognitive sciences on complex skill acquisition to create a mastery practice design for interpersonal skills training. Comparison to conventional behavior modeling workshop practice using a pretest-posttest control group design indicated improvements in retention and behavioral demonstration measures but failed to document any effect on transfer.

Transfer of training, defined as the application of newly acquired skills on the job, is a critical issue for HRD professionals (Baldwin & Ford, 1988; Broad & Newstrom, 1992). Enormous investments in training are believed to be largely wasted because of inadequate transfer, especially in the "soft skills" area of management development such as interpersonal communication and negotiation skills training. For example, Dixon (1990), after examining three decades of evaluation studies on management development programs, concluded that the programs appeared to have little lasting impact.

The broad questions that researchers are trying to answer are: "What factors most influence learning and transfer and how can we manage these factors to improve transfer of training?" Baldwin and Ford (1988), in their review of the transfer literature, proposed a conceptual framework for the study of training transfer. According to their model, transfer is a function of trainee characteristics, the degree of learning, and the work environment. The degree of learning, in turn, is a function of trainee characteristics, training design, and work environment. This study focused on the training design component and a sub-factor of Baldwin and Ford's model related to learning principles and conditions of practice. The purpose of the study is to explore the research question: "What is the effect of a mastery practice design on learning and transfer in behavior modeling training of supervisory listening skills?"

Theoretical Framework

Behavior modeling is currently the primary training design for delivery of supervisory interpersonal skills training in business today (Byham & Pescuric, 1996). Behavior modeling training was introduced in the early 1970's and based on Bandura's social learning theory (Bandura, 1977; Decker & Nathan, 1985; Goldstein & Sorcher, 1974). A number of research studies have demonstrated that behavior modeling training can be an effective training method in terms of reactions, knowledge gains, behavioral changes on the job, and business impact (for the latest review, see Russ-Eft, 1997).

Bandura's theory identifies four major sub-processes that govern observational learning: attention, retention, motor reproduction, and motivation. In behavior modeling designs, the retention and motor reproduction sub-processes are addressed through behavioral rehearsal and feedback in the form of practice using structured role-plays. Practice with feedback has been called "the crux" of behavior modeling training (Pescuric & Byham, 1996, p. 29) and there have been a number of articles in the popular literature emphasizing the importance of practice (e.g., Georges, 1996; Mills & Pace, 1988; Yelon & Berge, 1992). However, as noted by Salas, Cannon-Bowers, and Kozlowski (1997), there appears to be little empirical research on the mechanisms and principles of skill practice in relation to learning and transfer in a field environment. This is especially true for the more complex interpersonal skills that include significant cognitive components such as active listening.

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Traditional principles for conditions of practice, such as massed or distributed training, whole or part training, feedback, and overlearning, have been derived primarily from research on simple verbal- or motor-skills training (Adams, 1987; Baldwin & Ford, 1988). Within the behavior modeling research paradigm, there have been studies that have validated the importance of the rehearsal and feedback components (e.g., Fyffe & Tian, 1979; Stone & Vance, 1976). But there appears to be only two studies that have actually manipulated components of the practice and feedback process for interpersonal skills training (Decker, 1983; Mills & Pace, 1989). Decker (1983) studied the effects of rehearsal group size and video feedback on verbal and behavioral reproduction of skills for doing on-the-job training. He found that behaviorally rehearsing in small groups (with one or two observers as opposed to the entire training group) and providing immediate videotape feedback resulted in the highest reproduction scores. Mills and Pace (1989) examined the effects of various combinations of practice and feedback on cognitive recall and demonstration of listening skills immediately after training, two days later, and two weeks later. The combination of both practice and video feedback produced the greatest effect on the long-term performance scores. Of particular interest in this study was the decay in both recall and performance after just two weeks, leading to a call by the authors for overlearning through additional practice and feedback to fortify performance levels. This highlights a particular problem with interpersonal skills training: participants come to the training with behavioral habits firmly established. While modeling may indeed result in the learning of new behaviors, old ways of acting tend to re-assert themselves back in the workplace (Goldstein & Sorcher, 1974).

Though well designed, both the Decker and Mills and Pace studies have limitations due to their sample (college population) and failure to examine the effect of the training manipulations on actual transfer. What is needed is an "industrial strength" practice and feedback training design to help deal with these tough transfer issues in actual business environments. One possible approach to the problem may be to extend the theoretical framework that guides behavioral modeling practice to include the latest research on complex skill acquisition from cognitive and educational psychology as summarized by Anderson (1995; 1996). According to Anderson, skill learning occurs in three stages: (a) a cognitive stage, in which a description of the procedure is learned (declarative knowledge); (b) an associative stage, in which a method for performing the skill is worked out (procedural knowledge); and (c) an autonomous stage, in which the skill becomes more and more rapid and automatic (skill acquisition). It is this third stage which is crucial for competent performance (Shiffrin & Schneider, 1977), where component skills become compiled and automated so that conscious process capacity can be devoted to the more demanding aspects of complex tasks. Goldstein (1993) describes such automaticity as a "crucial point in instructional theory" (p. 110). Unfortunately, there's only one way that automaticity is developed – through extensive, guided practice (Anderson, 1995). Thus, one reason behavior modeling training fails to transfer may be because the typical practice design takes the trainee only through the second stage of Anderson's model. Trainees only practice a few rounds, just enough to become familiar with the prescribed behaviors. They learn the steps but fail to build genuine skill because trainers underestimate the true complexity of interpersonal skills such as active listening (Mills & Pace, 1989). For example, a typical learning point in active listening skills is to "establish and maintain rapport." To accomplish this, trainees have to simultaneously attend to the message at three levels: verbal, vocal, and visual. In addition, they must use a variety of key behaviors, such as remaining neutral, using "door openers," reflecting back words and feelings, and matching or pacing the sender's delivery. This is a "high load" cognitive task. It's very difficult for most people to both think about what they are supposed to be doing and execute the behaviors in a comfortable, fluid manner without extensive practice. As noted by Georges (1996), we typically produce graduates who are able to perform only crude, forced imitations of the skill. People don't like to look clumsy and artificial to their bosses, peers, or subordinates. Therefore, the new "skills" learned in class soon vanish from lack of use.

Mastery Practice Design and Hypotheses

Instructional principles drawn from Anderson's work (Glaser, 1990) include (a) extensive targeted practice beyond the point of mastery, (b) a tutor's close control of the learning process, (c) immediate feedback, and (d) a gradual approximation of expert behavior by accumulation of components of the skill. Based on these principles, a special "mastery practice" protocol was developed by the researcher for empirical evaluation. The protocol contained the following components: (a) mastery (continued drill to 100% criterion against a behavioral checklist), (b) overlearning (to a minimum 50% level), (c) one-on-one expert coaching, and (d) video feedback. The procedure used a learning lab format where participants in the test group met individually with the researcher for a 90 minute session in a small room equipped with a table, chairs, and video equipment.

On the basis of the foregoing discussion, this study tested the following hypotheses: trainees participating in the mastery practice design, when compared to trainees participating in the traditional workshop practice design, will have (a) higher cognitive retention of the listening model, (b) better performance on behavioral demonstrations through role-play, and (c) greater transfer of behavior as measured by perceptions of coworkers.

Method

Sample Participants in the study were 42 first line supervisors and managers at a consumer product manufacturing plant located near Atlanta, Georgia. The initial group represented the entire supervisory population in the production area of the plant. Four participants missed various portions of the training and were deleted from the database. The remaining 38 participants were well-educated (average 15 years of schooling), experienced in supervision (average 6.4 years in supervisory positions), and responsible for an unusually large number of direct reports (average 28.5).

Training Program The training program focused on active listening skills. The program used a classic behavior modeling design (Decker & Nathan, 1985) and consisted of six hours of instruction. Developed internally by the researcher's instructional design staff, the program was a fourth-generation design and had been successfully delivered to more than 300 supervisors and managers over a six-year period in various divisions of a national distribution firm. The program taught specific behaviors related to four key skill sets: *act like a listener, maintain rapport, ask open-ended questions, and check for understanding*. Workshop content and activities were adapted to the manufacturing environment and role model videos were shot at the plant using plant personnel as models. Role-play situations used throughout the training were tailored to plant specific situations and averaged 6 to 8 minutes in length. The plant was scheduled to change to a self-directed work team production process in 1998. The effective listening program was considered a valuable supplement to other training designed to support the supervisors during the transition to self-directed teams. Three executive directors of manufacturing and the vice president of manufacturing participated fully in all phases of the training, including the data collection, to demonstrate support for the intervention.

Procedure The study employed a pretest-posttest control group design. Prior to training, each participant completed a role-play that was videotaped to provide a baseline on listening skills behavior. In addition, an anonymous and confidential 360-degree survey on workplace listening practices was completed by up to six associates for each participant.

All participants then attended a four-hour listening skill workshop using standard behavioral modeling protocol. This included presentation and discussion of each skill set, viewing of role model videos, cognitive rehearsal of the key behaviors, and part-task practice of each skill set in triads using behavioral checklists. At the conclusion of the basic workshop, participants were tested for immediate recall of the listening skill model. During a break, trainees were paired on the basis of boss, department, gender, and years of experience as a supervisor and randomly assigned from each matched pair (Fleiss, 1981) to one of two conditions: conventional workshop practice (control group) and mastery lab practice (test group). Trainees assigned to the control condition returned to the workshop, formed new role-play triads, and participated in whole-task practice of the full listening model for 90 minutes.

The following week, each trainee assigned to the test condition participated in one-on-one role-play practice with the researcher for a 90-minute period using the mastery lab protocol. The practice process began with a viewing of the participant's pre-training role-play against the same

10-item behavioral checklist used in the whole-task practice segment of the workshop. The participant and the researcher, serving as coach, shared and discussed the ratings and the participant selected one or two of the behaviors to focus on for the next round of role-play practice. The role play situation was then repeated, videotaped, and analyzed using the same behavioral checklist and discussion procedure. With each successive round of role-play, the participant was encouraged to take more responsibility for the analysis and to continue incorporating additional behaviors as targets for focused practice. This scaffolding process (Palincsar & Brown, 1984) continued until the participant and researcher could agree that all 10 behaviors on the checklist had been adequately demonstrated in one role-play. This constituted the mastery criterion. After mastery was obtained, additional practice rounds were conducted as time permitted. The average participant reached mastery in two rounds and continued for one additional round for 50% overlearning.

Four weeks following the training for each group, cognitive retention of the listening skills model was assessed, new role plays were video-taped to assess behavioral proficiency, and the listening practices survey was repeated to assess behavior change in the workplace. At the conclusion of the study, semi-structured interviews were conducted with 36 of the 38 participants to obtain qualitative data on the dynamics of the learning and transfer process related to the two training conditions. In addition, the mastery lab experience was made available to all participants in the control group.

Measures Learning was assessed according to the 3-level framework suggested by Alliger, Tannenbaum, Bennett, Traver, and Shotland (1997): immediate knowledge, knowledge retention, and behavior/skill demonstration. Immediate knowledge was used as a covariate for the knowledge retention measure. Transfer of training was evaluated with a 360-degree survey instrument.

Immediate post-training knowledge This first level measure was administered upon conclusion of the basic workshop to assess immediate recall. Participants were asked to fill in a blank version of the listening skills model taught in the course. This required participants to list from memory the four major learning points of the program and the key behaviors associated with each learning point. Five points were assigned to each major learning point and one point to each behavior for a total of 41 possible points.

Knowledge retention The same fill-in-the-blank instrument was used to assess retention four weeks after training. Participants were not informed of this procedure in advance. Both measures of declarative knowledge, immediate recall and retention were scored independently by two graders blind to training condition, followed by a joint discussion to achieve consensus on a single score. Interrater agreement prior to discussion on this measure was .99.

Behavior/skill demonstration To assess proficiency in use of the listening skills, the pre- and post-training videotaped role-plays were rated by two trained raters using a criterion referenced behavioral checklist (Blank, 1982). Raters were blind to condition. Each behavior on the checklist was worded so it could be observed and checked yes or no. Ten key behaviors were listed with provisions for one additional check on four of the more complex behaviors, resulting in a maximum score of 14 checks. Videos were rated independently, followed by a joint discussion to achieve consensus on a single score. Observer agreement prior to discussion on this measure was .87.

Transfer Listening skills transfer was assessed by use of the Listening Practices Feedback Report (LPFR) developed by Brandt Management Associates. The LPFR measures 28 listening behaviors using a 5-point Likert scale with ratings from 1 ("rarely if at all") to 5 ("almost all the time"). It has been found to be a sufficiently valid and reliable measure of listening in the workplace (Emmert, Emmert, & Brandt, 1994). Example statements from the questionnaire include (a) "gives the speaker full attention and is not preoccupied with other concerns, (b) "during meetings and conversations, permits the speaker to continue without interruptions" and (c) "responds or paraphrases comments to insure understanding." In addition to the self-rating, copies of the LPFR were distributed on a confidential basis to the participant's boss, two peers, and three subordinates. The average number returned per participant for the pre-training and post-training surveys was 5.7 and 5.1, respectively.

Results

The correlation matrix of the dependent post-training measures is presented in Table 1. Significant correlation was observed between the knowledge retention and behavioral demonstration measures. There was no correlation between either retention or behavioral demonstration and the transfer measure.

Table 1: Intercorrelations for Dependent Measures

Measure	Retention	Demonstration
Retention		
Demonstration	.34*	
Transfer	-.09	.01

N = 38 (post-training); * $p < .05$

A one-way analysis of covariance was conducted on each dependent measure to determine whether the post-training results for the two groups differed after adjustments were made for pre-training differences. The assumption of equal regression slopes was tested for each measure and found tenable. With three planned comparisons, alpha level was set at .10 and controlled through the *Bonferroni inequality* (Stevens, 1990) to reduce the chance of a Type I error. Dividing the overall alpha by the number of tests (.10/3) resulted in each comparison being tested at the .033 level. On this basis, the ANCOVA indicated that the mean retention scores for the mastery practice group were significantly higher than retention scores for the conventional practice group, $\underline{F}_{(.033,\ 1,\ 35)} = 6.06$, $\underline{p} = .019$. Furthermore, the mean behavioral demonstration scores for the mastery practice group were significantly higher than the demonstration scores for the conventional practice group, $\underline{F}_{(.033,\ 1,\ 35)} = 5.39$, $\underline{p} = .026$. There was no significant difference between groups on the transfer measure. Table 2 presents the means, standard deviations, and adjusted means for all measures by group. Table 3, on the following page, presents the analysis of covariance summary.

Table 2. Means and Standard Deviations for Dependent Measures by Group

			Post-Training		
Measure	Pre-Training		Obtained		Adjusted
Group	M	SD	M	SD	M
Retention					
Mastery	28.95	8.85	27.37	8.56	26.26
Conventional	24.79	8.33	16.95	12.73	18.05
Demonstration					
Mastery	4.26	1.37	8.42	1.07	8.47
Conventional	4.58	1.30	7.21	2.23	7.16
Transfer					
Mastery	3.89	.25	3.94	.31	3.94
Conventional	3.90	.27	3.95	.31	3.94

N = 38 (19 per group)

Discussion

The results indicate support for the hypotheses related to greater learning for the mastery practice group as measured by knowledge retention and behavioral demonstration. This is consistent with cognitive research on memory and learning that indicates both memory for material and speed of retrieval improves the more elaborately it is processed (Anderson, 1995). However, it should be noted that there was still significant room for improvement in both groups. On the cognitive recall test, the conventional workshop group achieved only 17 points or 42% of the maximum possible score four weeks after the training. The mastery group did much better but still only scored at 69% of the total possible points. In a traditional academic classroom, the groups would be graded "F" and "D" respectively. These memory scores correlated with less than stellar behavioral demonstration scores. The optimum score on the behavioral checklist was 14 checks. After training, the conventional practice group averaged 7.2 checks, or 51% of potential. The mastery group averaged 8.4 checks, a significant difference, but still only 60% of potential. The problem with memory retrieval could be seen clearly during the post-training videos. As participants began the role-play, they were asked to simply use the behaviors learned in the training workshop. Many had quizzical looks on their faces as they struggled to remember what they were supposed to do just four weeks after the training. This points to a critical insight for HRD practitioners. One of the possible problems with transfer is that the workshop participants may not be really learning the material in the first place and more attention in training needs to be paid to the acquisition, retention, and retrieval of the learning points. It is difficult for someone to try to use the behaviors in the workplace if they don't remember what they are.

Table 3. Analysis of Covariance Summary for Dependent Measures

Source	DF	Sum of Squares	Mean Square	F Value	Sig. of F
Retention					
Group	1	603.20	603.20	6.06	.019
Pre Treatment	1	751.79	751.79		
Error	35	3,848.58	99.59		
Demonstration					
Group	1	15.98	15.98	5.39	.026
Pre Treatment	1	5.96	5.96		
Error	35	103.83	2.97		
Transfer					
Group	1	.00	.00	.00	.969
Pre-Treatment	1	1.74	1.74		
Error	35	1.68	.05		

In regard to the transfer measure, there was no significant difference between groups and no significant change from pre-training conditions. One explanation for this, of course, could be the inadequate learning and retention. However, based on the post-training interviews, two other factors may have contributed to the results. First was a methodological problem with the 360-degree survey. Each participant included on the distribution list their boss and two peers as well as three subordinates. Since all supervisors and managers in the production facility participated in the training, this meant that three of the six participants in the survey might have been affected by ***response-shift bias*** in the survey due to their participation in the training (Howard & Dailey, 1979). This is a phenomenon where people tend to rate differently (and usually more stringently) on a post-training survey after they have been exposed to the training. This viewpoint was collaborated without prompting by at least six of the participants. A second factor that may have influenced transfer results was the ***opportunity to perform*** (Ford, Quinones, Sego, & Sorra, 1992). It was assumed that the four-week period would give supervisors adequate time to demonstrate the new behaviors in the workplace. However, interviews with participants indicated that few actually had a chance to use the type of active listening process taught in the workshop with the survey participants. This was due in part to the unusually large number of direct reports each supervisor managed coupled with a number of organizational and production process changes that were taking place during the research period that put additional time stress on everyone in the organization.

Based on the findings, it is clear that the mastery practice concept needs further research. In particular, mechanisms must be developed to enhance the acquisition, retention, and retrieval processes for memory and investigations conducted on just ***how much*** practice is needed to turn this declarative knowledge into automated procedural knowledge. The actual measurement of transfer in the workplace also continues to be a challenging problem. In regard to listening skills, use of a valid and reliable survey instrument such as the LPFR to measure perceptions of listening behaviors in the workplace still seems appropriate. But more attention needs to be paid to the survey methodology. Example enhancements might include: (a) increasing the number of survey participants that are not participating in the training (b) providing a briefing for respondents on how to complete the survey, and (c) allowing more time after training before administration.

Contributions to HRD Theory and Practice

Transfer of training is a complex and systemic issue with many variables (Ford & Associates, 1997). One role of theory in HRD is to discern priorities (Torraco, 1997). As we continue to develop improved theoretical evaluation and measurement models, training design has been identified as an important component (Baldwin & Ford, 1988; Ford & Weissbein, 1997; Holton, 1996). Yet, there are few definitive guidelines for what constitutes appropriate transfer designs (Holton, 1995). This paper has pointed to the need to link advances in the cognitive sciences on memory and skill acquisition with social learning theory to form a basis for developing improved practice designs within the behavior modeling context.

In regard to HRD practice, this study appears to be the first empirical study on the effect of mastery practice design in a field environment. An interview with Sue Borain, an associate with Zenger Miller, a leading supplier of training programs based on the behavior modeling training design, indicated that the degree of practice is an important practical issue (personal communication, April 28, 1997). According to Borain, clients, when pressed for time, invariably reduce the amount of time allotted for skill practice in the training design. In addition, as noted by Georges (1996), another critical issue is the quality of practice itself. Practice that takes place in a typical workshop may be poorly executed. Trainees thus leave the training without the mastery or confidence to perform effectively back on the job. This study has therefore contributed to HRD training practice by providing empirical data in a field setting on the importance of the degree and quality of practice to the learning and transfer process and suggesting some initial guidelines for the design of more powerful practice sessions. The conditions of practice for complex interpersonal skills in terms of length, distribution, and design should continue to be a pragmatic research concern for HRD professionals.

References

Adams, J. A. (1987). Historical review and appraisal of research on the learning, retention, and transfer of human motor skills. Psychological Bulletin, 101(1), 41-74.

Alliger, G. M., Tannenbaum, S. I., Bennett, W., Jr., Traver, H., & Shotland, A. (1997). A meta-analysis of the relations among training criteria. Personnel Psychology, 50(2), 341-358.

Anderson, J. R. (1995). Learning and memory: An integrated approach. New York: John Wiley & Sons.

Anderson, J. R. (1996). The architecture of cognition. Mahwah, NJ: Lawrence Erlbaum.

Baldwin, T. T., & Ford, K. J. (1988). Transfer of training: A review and directions for future research. Personnel Psychology, 43, 63-105.

Bandura, A. (1977). Social learning theory. Englewood Cliffs, NJ: Prentice Hall.

Blank, W. E. (1982). Handbook for developing competency-based training programs. Englewood Cliffs, NJ: Prentice-Hall.

Broad, M. L., & Newstrom, J. W. (1992). Transfer of training: Action-packed strategies to insure high payoff from training investments. Reading, MA: Addison-Wesley.

Byham, W. C., & Pescuric, A. (1996, December). Behavior modeling at the teachable moment. Training, 33, 50-56.

Decker, P. J. (1983). The effects of rehearsal group size and video feedback in behavior modeling training. Personnel Psychology, 36, 763-773.

Decker, P. J., & Nathan, B. R. (1985). Behavior modeling training: Principles and applications. New York: Praeger.

Dixon, N. M. (1990). Evaluation: A tool for improving HRD quality. San Diego: University Associates.

Emmert, V., Emmert, P., & Brandt, J. (1994, March). An analysis of pre- and post-listening training scores on the Listening Practices Feedback Report. Paper presented at the International Listening Association, Boston, MA.

Fleiss, J. L. (1981). Statistical methods for rates and proportions. (2nd ed.). New York: John Wiley.

Ford, J. K., & Associates (Eds.). (1997). Improving training effectiveness in work organizations. Mahwah, NJ: Lawrence Erlbaum.

Ford, J. K., Quinones, M. A., Sego, D. J., & Sorra, J. S. (1992). Factors affecting the opportunity to perform trained tasks on the job. Personnel Psychology, 45, 511-527.

Ford, J. K., & Weissbein, D. A. (1997). Transfer of training: An updated review and analysis. Performance Improvement Quarterly, 10(2), 22-41.

Fyffe, A. E., & Tian, P. O. (1979). Influence of modeling and feedback provided by the supervisors in a microskills training program for beginning counselors. Journal of Clinical Psychology, 35(3), 651-656.

Georges, J. C. (1996, January). The myth of soft-skills training. Training, 33, 48-54.

Glaser, R. (1990). The reemergence of learning theory within instructional research. American Psychologist, 45(1), 29-39.

Goldstein, A. P., & Sorcher, M. (1974). Changing supervisor behavior. New York: Pergamon.

Goldstein, I. L. (1993). Training in organizations: Needs assessment, development, and evaluation. (3rd ed.). Pacific Grove, CA: Brooks Cole.

Holton, E. F., III. (1995, March). In search of an integrative model for HRD evaluation. Paper presented at the Academy of Human Resource Development, St. Louis, MO.

Holton, E. F., III. (1996). The flawed four-level evaluation model. Human Resource Development Quarterly, 7(1), 5-25.

Howard, G. S., & Dailey, P. R. (1979). Response-shift bias: A source of contamination of self-report measures. Journal of Applied Psychological Measurement, 64, 144-150.

Mills, G. E., & Pace, R. W. (1988, May). Providing practice for skill development. Training and Development Journal, 42, 36-38.

Mills, G. E., & Pace, R. W. (1989). What effects do practice and video feedback have on the development of interpersonal communication skills? The Journal of Business Communication, 26(2), 159-176.

Palincsar, A. S., & Brown, A. L. (1984). Reciprocal teaching of comprehension-fostering and comprehension-monitoring activities. Cognition and Instruction, 1(2), 117-175.

Pescuric, A., & Byham, W. C. (1996, July). The new look of behavior modeling. Training and Development, 50, 25-30.

Russ-Eft, D. (1997). Behavioral modeling. In L. J. Bassi & Russ-Eft (Eds.), What works: Training and development practices (pp. 105-149). Alexandria, VA: American Society for Training & Development.

Salas, E., Cannon-Bowers, J. A., & Kozlowski, S. W. J. (1997). The science and practice of training: Current trends and emerging themes. In K. J. Ford & Associates (Eds.), Improving training effectiveness in work organizations (pp. 357-375). Mahwah, NJ: Lawrence Erlbaum.

Shiffrin, R. M., & Schneider, W. (1977). Controlled and automatic human information processing: II. Perceptual learning, automatic attending, and a general theory. Psychological Review, 84(2), 127-190.

Stevens, J. P. (1990). Intermediate statistics: A modern approach. Hillsdale, NJ: Lawrence Erlbaum.

Stone, G. L., & Vance, A. (1976). Instructions, modeling, and rehearsal: Implications for training. Journal of Counseling Psychology, 23(3), 272-279.

Torraco, R. J. (1997). Theory-building research methods. In R. A. Swanson & E. F. Holton, III (Eds.), Human resource development research handbook (pp. 114-137). San Francisco: Berrett-Koehler.

Yelon, S., & Berge, Z. (1992, September). Practice-centered training. Performance & Instruction, 31, 8-12.

Training Transfer as it Relates to the Instructional System and the Broader Work Environment

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The purpose of this exploratory study was to identify the key factors within and outside the training context that could affect training transfer. Data analysis showed that the most important variables that can facilitate training transfer are: measurement of trainee knowledge before and immediately after training; supervisory support and encouragement for the application of new skills and knowledge; intrinsic rewards, such as praise and recognition; a participative/sociotechnical organization that is characterized by a high degree of employee involvement; and, a continuous learning environment that encourages frequent participation in multiskill training and retraining programs.

As it has recently been described by many researchers, research on training has in many respects been nontheoretical and nonempirical (Baldwin & Ford, 1988; Clark, Dobbins, & Ladd, 1993). In particular, Clark et al. (1993) stated:

> Unfortunately, research on training has generally been atheoretical and faddish. Researchers have frequently attempted to increase the effectiveness of training by focusing on training techniques. Special attention has also been paid to the arrangement of training environments. But without a theoretical basis for studying the techniques and training environments, researchers are often at a loss either to explain why they are effective or to predict their effectiveness in other settings or for other trainees. (p. 293)

The same sentiment expressed by Clark et al. (1993) was shared by Rouiller and Goldstein (1993), who stated that "in nearly all studies of training outcomes, the emphasis has been on identifying and examining the characteristics of training programs and individual learners and relating these factors to training and job performance" (p. 377). This approach, the authors continue, ignores the characteristics of the job situation and whether these characteristics influence the transfer of training behavior onto the job.

With regard to the problematic nature of training research, Tracey, Tannenbaum, and Kavanagh (1995) stated that "significantly less research has examined the transfer of trained skills to the job, and even fewer studies have examined how the work environment influences such transfer. From a theoretical standpoint, a more comprehensive conceptual framework of training effectiveness can be developed and tested by considering factors outside the training context" (p. 239). Tracey et al. (1995) also emphasized that despite the potential importance of the work environment, little research has been conducted to operationalize and empirically assess training-specific situational factors that either facilitate or impede the application of newly learned skills on the job.

Purpose of the Study

Given the problematic nature and limitations of research on training, the main purpose of this exploratory study was to bridge some of the above stated research gaps by identifying key factors within and outside the training context that could affect training transfer after the introduction of new technologies in the organization. In doing so, the main instructional systems design, transfer of training climate, and organizational variables that were perceived to affect training effectiveness were to be identified, and their relationship to training knowledge immediately after training as well as three to nine months later to be described.

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Since research in this area has been very limited, a secondary objective of this study was to develop a reliable and valid survey instrument with which all the relevant variables and constructs could be assessed. The theoretical framework upon which the instrument was developed were the instructional design, training transfer, and sociotechnical systems theories which in turn furnished the training and work environment variables projected to have an influence on trainee performance.

Training Transfer Variables In short, the following training transfer climate variables that were found by the Rouiller and Goldstein (1993) as well as the Tracey et al. (1995) studies to have a direct effect on post-training behaviors were incorporated in the survey instrument of the study:

1. The degree to which characteristics of a trainee's job prompted or reminded him or her to use new skills and knowledge acquired in training (task cues).
2. The degree to which trainees were openly discouraged from using new skills and knowledge acquired in training (punishment consequences).
3. The degree to which supervisors supported and encouraged the application of new skills and knowledge acquired in training (supervisory support for new skills).
4. The degree to which trainees received extrinsic rewards for using newly learned skills and knowledge acquired in training (extrinsic reinforcement consequences).
5. The degree to which trainees received intrinsic rewards for using newly learned skills and knowledge acquired in training (intrinsic reinforcement consequences).
6. The degree to which the users of the new technology functioned in a work environment which emphasized innovation and competition (innovative-competitive organization).
7. The degree to which the users of the new technology functioned in an environment in which supervisors and coworkers strongly encouraged the acquisition and use of any new relevant skills and behaviors (social support for new skills).

Organizational Moderator Variables The derivation of the following 10 questions that dealt with the work environment within which the training and new technology interventions were introduced, was based on Pasmore's (1988) STS assessment survey, the properties of motivating jobs as defined by Hackman and Oldham (1980), and the comprehensive seven year meta-analysis study by Macy and Izumi (1993) in which the d-effects of 60 sociotechnical action-levers on organizational outcomes were examined. The purpose of these questions was to determine the degree to which the new technology was introduced in an organization whose design was consistent with sociotechnical systems principles, which in turn "have been demonstrated to produce high levels of commitment and performance" (Pasmore, 1988, p. 157).

8. The degree to which the users of the new technology functioned in a very participative organization characterized by a high degree of employee involvement (Participative organization).
9. The degree to which the users of the new technology were members of self-directed teams (self-directed teams).
10. The degree to which the users of the new technology were intimately involved in communications and decisions regarding the design and development of the new technology (employee involvement).
11. The degree to which the users of the new technology functioned in a multiskill work environment characterized by a common job classification system (multiskill work environment).
12. The degree to which the users of the new technology worked in a flat and decentralized organization, composed of mini-enterprises functioning within the firm (flat organization).
13. The degree to which the users of the new technology frequently participated in multiskill training and retraining programs and were rewarded for doing so (multiskill training environment).
14. The degree to which the users of the new technology were involved in enriched jobs that required a variety and higher level skills which in turn took a long time to master (skill variety).
15. The degree to which the users of the new technology did a whole and complete piece of work and had the authority to make all important decisions about it throughout the process (task identity).
16. The degree to which in carrying out their work activities required by the job, the users of the new technology received clear information about the effectiveness of their performance from the job itself and their supervisors (job/supervisory feedback).

17. The degree to which the users of the new technology functioned in an environment in which a great deal of information about business was shared with employees (information sharing).

Research Questions

In short, this study attempted to answer the following research questions:

Research Question 1 If training is used during the introduction of the new technology in the organization, what is the degree of association between each of the following instructional system components and knowledge of training material immediately after training (posttest score) as well as three to nine months later (training retention score)?

1. Needs assessment (person analysis, task analysis, organizational analysis).
2. Goals and objectives.
3. Audience analysis.
4. Learning task analysis and/or procedural analysis.
5. Evaluation (Pre-test, trainee reactions, summative, impact).

Research Question 2 If training is used during the introduction of the new technology in the organization, which of the identified training transfer climate and organizational moderator variables facilitate or impede its effectiveness?

Methodology

Subjects The sampling frame of this study consisted of 4097 training, human resource, quality, and organization development professionals who were national members of the American Society of Training and Development (ASTD) and were listed under the Total Quality Management section of the 1995 directory. Out of these 4097 national members, 971 were randomly selected to participate in the study through the circular systematic sampling procedure.

Response rate. The overall response rate for this study was calculated at 33.26% (323/971). Of the 323 returned surveys, 59 belonged to participants who were unable to provide the necessary data and they were therefore returned blank. Furthermore, 29 of the mailed surveys were sent to addresses that were experiencing delivery problems and they were thus dropped from the sample. In all, 264 of the returned surveys (27.19%) had usable data upon which the statistical analysis of this study is based on.

Participants. The participants of this study consisted of training, human resource, organization development, and quality managers with an average age of 43.35 years (SD = 8.32). Fifty-eight percent of the respondents were male and each participant had held his or her present job for an average of 4.65 years (SD = 3.70). Collectively, 96.4% of the respondents had a college degree and represented 46 states. Furthermore, the respondents worked in all sectors of the industry with manufacturing (33.19%), health care (10.54%), and financial services (10.14%) being the majority. Finally, the participants of this study worked in organizations that on the average employed 7,595 employees (SD = 19,244).

New Technology. In terms of the new technology introduced in the organization, representing 77.2% of valid responses, information technology (i.e., a technology that stores, retrieves, analyzes, or transmits information) was overwhelmingly the type of technology most respondents (203/264) introduced in their organization during the last five years. On the other hand, computer-aided manufacturing technologies (such as robotics and computer-aided design and manufacturing), materials technologies (such as ceramics and nonmetallic composites), and biotechnologies (i.e., technologies that use living organisms to modify plants or animals) were introduced by only 10% of the respondents. The remaining 11.8% of participants introduced a variety of other technologies, such as new equipment or machinery, production systems, and process operations.

Instrument The instrument for this study consisted of a mail questionnaire which was custom-designed for the purposes of this study. The questionnaire was pilot-tested on a group of 50 participants before the main study.

Method Once the pilot-study was conducted and appropriate changes to the instrument were made, the finalized survey questionnaire was sent to the randomly selected participants. A week after the first mailing a postcard reminder was mailed to all participants. Three weeks after the initial mailing, a second cover letter and a second questionnaire were sent to all non-respondents. The survey was closed three weeks later.

Data analysis After the data from the 264 participants was collected, both descriptive and inferential statistics were used to analyze it. With regard to research question 1, a correlational analysis indicated the degree of association between the instructional system components and knowledge of training material immediately after training as well as three to nine months later. A correlational analysis was also used to partly answer research question 2. Further, a multiple regression analysis was used to determine how the instructional system components in conjunction with the identified training transfer and organizational moderator variables and factors related to training retention three to nine months after training.

Stepwise regression was the selection method used when building the regression models for this study. The F-to-enter and F-to-remove values used were 0.05 and 0.01 respectively. In order to increase the reliability of the produced regression models, all outliers greater than three standard deviations were excluded from the analysis.

The reliability of the instrument was assessed via the calculation of coefficient alpha for all Likert scale items of the questionnaire. As in the case of reliability, all Likert scale items were also used to empirically construct validate the instrument through the use of a principal components analysis. For this study, the criterion used in order to determine how many components to retain was that of Kaiser (i.e., only components whose eigenvalues are greater than 1 are retained), which according to Stevens (1986) is one of the most accurate and widely used ones.

Results

Reliability and Construct Validity In terms of reliability, coefficient alpha for the Likert type items of the instrument was measured at 0.87. In terms of construct validity, the principal components analysis that used a varimax rotation produced a four-factor solution that accounted for 55.1% of the total variance. The sample size utilized for the principal components analysis was 242 for which the critical value for significant loadings was calculated at |0.33| (Stevens, 1986).

In short, the first rotated factor which accounted for 33.7% of the total variance had the highest factor loadings (fl) from the following eight variables: innovative-competitive organization (6; fl = 0.51); social support for new skills (7; fl=0.66); participative organization (8; fl=0.82); self-directed teams (9; fl=0.56); employee involvement (10; fl= 0.50); flat organization (12; fl=0.52); multiskill training environment (13; fl=0.62); and, information sharing (17; fl=0.79).

From the above variable descriptions, it becomes evident that the first rotated factor deals with the general organizational environment within which the new technology was introduced. Given that the variables that highly correlate with this factor are those that were incorporated in the questionnaire in order to determine the degree to which the new technology was introduced in an organization whose design was consisted with sociotechnical systems (STS) principles, this factor was interpreted as the "STS organization" factor.

The second rotated factor, which accounted for 8.2% of the total variance, highly correlated with the following variables: multiskill work environment (11; fl=0.70); skill variety (14; fl=0.68); task identity (15; 0.69); and, job/supervisory feedback (16; fl=0.44). In all, the second rotated factor was successful in grouping the variables that were incorporated in the instrument in order to describe the job dimensions of the work performed by the users of the new technology. This factor was defined as the "job design" factor.

The third factor of the varimax rotated factor matrix accounted for 7.1% of the total variance and drew the highest loadings from the following three variables: task cues (1; fl= 0.74); punishment consequences (2; fl=0.53); and, supervisory support for new skills (3; fl=0.64). Unlike the first two factors which dealt with the organizational and job environment in general, the third factor dealt with the training transfer climate in which the application of new skills and knowledge took place. This factor was therefore interpreted as the "training transfer climate" factor.

The fourth and final rotated factor accounted for 6.1% of the total variance and had the highest loadings from the following two variables: extrinsic reinforcement consequences (4; fl=0.83); and intrinsic reinforcement consequences (5; fl=0.61). The last factor can thus be interpreted as the "rewards for new skills" factor.

In summary, the principal components analysis and varimax rotation produced a four factor solution which empirically construct validated the instrument. More specifically, the produced factors were successful in differentiating between the STS, job design, and training transfer climate variables. It is worth noticing that the innovative-competitive (6) and social support (7) variables which were described by Tracey et al. (1995) as "continuous -learning culture scales" were found to be more highly associated with the "STS organization" factor rather than the "training transfer climate" factor. This finding in essence validates the assertion expressed by Tracey et al. (1995) that a sociotechnical organization is conducive to a work environment that promotes a positive training climate and a positive learning culture.

Significant Correlations of Posttest and Training Retention Scores with Instructional System, Training Transfer, and Sociotechnical Variables and Factors A summary of all significant Pearson correlations of the posttest and training retention scores with the instructional system, training transfer, and sociotechnical variables as well as the four factors is depicted in Table 1. Based on results summarized in Table 1 one may conclude that there is not a high degree of association between knowledge of training material immediately after training (training posttest score) as well as three to nine months later (training retention score) with the identified instructional system components. More specifically, training knowledge immediately after training was found to be significantly correlated with only one of the non-evaluation ISD components, person analysis ($\underline{r} = 0.215$, $\underline{p} < 0.05$). Other variables that were found to be more strongly associated with knowledge of training material immediately after training were pretest administration ($\underline{r} = 0.400$, $p < 0.01$), the pretest score ($\underline{r} = 0.401$, $\underline{p} < 0.01$), and summative evaluation ($\underline{r} = 0.396$, $\underline{p} < 0.01$).

In the aggregate then, training knowledge immediately after training was found to be more highly associated with the assessment of trainee knowledge before and immediately after training rather than the other identified ISD components. This can be considered as an important finding given that it statistically validates the importance of the training evaluation component as has been advocated by many human resource development theorists (Goldstein, 1986; Kirkpatrick 1987; Phillips, 1987).

With regard to retention of training material three to nine months after training, retention of training material was found to be highly correlated with the posttest score which in turn was obtained after the conduction of a summative evaluation ($\underline{r} = 0.503$, $\underline{p} < 0.01$). As far as the other ISD components are concerned, retention of training material was found to be significantly correlated with the development of goa's and objectives ($\underline{r} = 0.374$, $\underline{p} < 0.05$) as well as the assessment of trainee reactions towards the training program ($\underline{r} = 0.352$, $\underline{P} < 0.05$). The significant association of retention of training and the latter two variables suggests two things: (a) that training transfer is facilitated further when the trainees have a clear understanding of what skills, behaviors, knowledge, or attitudes need to be acquired after attending training; and (b) training transfer will be facilitated further when the trainees feel that they are an integral part of the training program and that their reactions towards it are seriously taken into consideration.

In terms of the training transfer and sociotechnical variables, training knowledge immediately after training (posttest score) exhibited a significant correlation with four of the seventeen training transfer and organizational variables used in the questionnaire. All four significant correlations were in the 0.210 to 0.235 range. Unlike posttest score, retention of training material three to nine months after the completion of training was found to be significantly correlated with nine of the seventeen training transfer and organization variables. The significant correlations of training retention with the training transfer and moderator organizational variables ranged from 0.322 to 0.577. In terms of factors, although posttest was not found to be significantly correlated with any of them, retention of training material significantly correlated with the training transfer climate ($r = 0.614$, $P < 0.01$) and sociotechnical organizational ($r = 0.322$, $P < 0.05$) ones.

Table 1

Summary of Significant Correlations for Training Posttest and Retention Scores[a]

		Training Posttest Score	Training Retention Score
Pearson Correlation	Posttest score	1.000	.503**
	Retention score	.503**	1.000
	Person analysis	.215*	.149
	Goals & objectives	.140	.374**
	G&O trng mngr involvement	.170	.428**
	Assessment of trainee reactions	.045	.352**
	Pretest administration	.400**	-.042
	Pretest score	.401**	.265
	Summative evaluation	.396**	.146
	Task cues	.139	.492**
	Supervisory support	.176	.577**
	Intrinsic reinforcement	.235*	.344*
	Social support for new skills	.108	.321*
	Participative organization	.215*	.505**
	Employee involvement	.210*	.433**
	Multiskill work environment	.002	.400*
	Flat organization	.080	.322*
	Multiskill training environment	.136	.237
	Job feedback	.210*	.287
	Information sharing	.084	.382*
	STS organization factor	.155	.322*
	Job design factor	.077	.255
	Training transfer climate factor	.164	.614**
	Rewards for new skills factor	.080	-.167

. **Correlation is significant at the 0.001 level (2-tailed).

*. **Correlation is significant at the 0.05 level (2-tailed).**

a. **Underlined variables or factors reflect predictors selected by the corresponding regression model.**

Stepwise Regression Model for Training Transfer Given the small number of respondents that provided data on the training retention variable (40/262), and that training retention was significantly correlated with two of the four factors, the regression model for training retention was built on the four factors as well as the four instructional system variables (goals & objectives- whether or not the training program involved the development of goals and objectives; goals & objectives trng mngr involvement - whether or not the training manager participated in the development of the goals and objectives of the training program; trainee reactions- whether or not the trainee reactions towards the training program were assessed; and, posttest score) which exhibited significant correlations with training retention. The results of the regression analysis are shown in Tables 2 and 3.

As it can be observed from Table 2, 56.2% of the variance of the training retention variable was accounted for by the training transfer climate factor and the posttest score variable. More specifically, the training transfer climate factor which has task cues (the degree to which the trainees

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Table 2

Stepwise Regression Model for Training Retention[a,b]

Model	Variables Entered	Variables Removed	R	R^2	Adjusted R^2	Std. Error Of the Estimate
1	Training transfer climate factor	.	.631	.398	.381	15.15
2	Posttest score	.	.750	.562	.536	13.10

[a]. **Dependent Variable: Retention Score; $N = 37$**

[b]. **Method: Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).**

Table 3

Beta Coefficients for Training Retention Regression Model

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	46.774	8.777		5.329	.000		
Training transfer climate factor	10.936	2.231	.564	4.902	.000	.973	1.027
Posttest score	.411	.115	.411	3.572	.001	.973	1.027

job prompts him or her to use the new skills and knowledge acquired during training), supervisory support (the degree to which supervisors supported and encouraged the application of new skills and knowledge acquired in training), and reprimanded (the degree to which the newly trained employees were reprimanded for failing to use their training) as the predominant variables, accounted for 39.8% of the total variance of retention of training. The remaining 16.4% of the total variance was accounted for by the posttest score variable (the knowledge of training content by trainees immediately after training).

The standardized beta values for the training transfer climate factor and posttest score variable were 4.902 ($p = 0.001$) and 3.572 ($p = 0.001$) respectively (Table 3). According to the adjusted R^2 value (0.536) in Table 2, shrinkage for the regression model at 4.62% was very small. The tolerance value (the proportion of the predictor's variance not accounted for by the other independent variables in the regression equation) of 0.973 for both predictors (Table 3) indicates that the independent variables were highly uncorrelated. However, given the small sample size that was used for the derivation of this regression model, one should view the results with caution.

Conclusions

Based on the above stated findings, one may conclude that retention of training material, and hence the success of a training intervention, is not only dependent on how much training content the trainees have knowledge of immediately after training, but the training transfer climate as well as the broader organizational environment within which training is implemented. According to the presented data, the most influential variables for training transfer are: supervisory support (the degree to which trainees functioned in an environment in which supervisors supported and encouraged the application of new skills and knowledge acquired in training; $r = 0.577$, $p < 0.01$); participative organization (the degree to which the trainees functioned in a very participative organization characterized by a high degree of employee involvement; $r = 0.505$, $p < 0.01$); task cues (the degree to which the characteristics of the trainee's job prompted or reminded her to use new skills and knowledge acquired in training; $r = 0.492$, $p < 0.01$); and, knowledge of training content immediately after training ($r = 0.503$, $p < 0.01$).

Another interesting conclusion that can be inferred from the data analysis is that extrinsic rewards, such as pay and promotions, as well as punishment for failing to use the new skills and knowledge, have very weak associations with knowledge of training content immediately after training ($r = -0.041$ and $r = 0.058$ respectively) or retention of training material three to nine months after training ($r = -0.079$ and $r = 0.052$ respectively). On the contrary, intrinsic rewards, such as praise and recognition for using the newly learned skills and knowledge acquired in training, proved to be a more valuable variable since it significantly correlated with both knowledge of training content immediately after training ($r = 0.235$, $p < 0.05$) and retention of training material three to nine months after the completion of training ($r = 0.344$, $p < 0.05$).

In short, what the findings of this study imply is that a training intervention would have a better chance of becoming successful when implemented in a participative organization where the employees not only are encouraged to learn and apply new skills and knowledge, but they are recognized for doing so. What can also be inferred from the findings of this study is that training effectiveness is not only dependent on the soundness of the training program and the prevailing training transfer climate, but the entire organization as a whole.

With regard to previous research, the results of this study tend to support those of Rouiller and Goldstein (1993) as well as those of Tracey et al. (1995) which in turn indicated that the training transfer climate and a continuous-learning culture have a direct impact on post-training behaviors. Further, like the findings of the Tracey et al. (1995) study, the results of this study are consistent with sociotechnical theory and also highlight the importance of social factors, such as supervisors and peers, when establishing supportive training and learning environments.

References

Baldwin, T.T., & Ford, J.K. (1988). Transfer of training: A review and future directions for future research. Personnel Psychology, 41(1), 63-105.

Clark, S.C.; Dobbins, H.G.; & Ladd, T.R. (1993). Exploratory field study of training motivation. Group & Organization Management, 18(3), 292-307.

Goldstein, L.I. (1986). Training in organizations: Needs assessment, development, and evaluation. Montery, CA: Brooks/Cole Publishing Company.

Hackman, J.R., & Oldham, G.R. (1980). Work redesign. Reading, MA: Addison-Wesley.

Kirkpatrick, L.D. (1987). Evaluation. In Craig, L.R. (3rd ed.), Training and development handbook: A guide to human resource development (pp 301-319). New York: McGraw-Hill Book Company.

Macy A.B., & Izumi, H. (1993). Organizational change, design, and work innovation: A meta-analysis of 131 North American field studies - 1961-1991. In Woodman, W.R., & Pasmore, A.W., Research in organizational change and development. An annual series featuring advances in theory, methodology and research (pp. 235-313). Greenwich, CT: JAI Press.

Phillips, J.J. (1987). Handbook of training evaluation and measurement methods (2nd ed.). Houston, TX: Gulf Publishing Company.

Pasmore, A.W. (1988). Designing effective organizations: The sociotechnical systems perspective. New York: Wiley & Sons.

Rouiller, J.Z., & Goldstein, L.I. (1993). The relationship between organizational transfer climate and positive transfer of training. Human Resource Development Quarterly,4(4), 377-390.

Stevens, J. (1986). Applied multivariate statistics for the social sciences. Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.

Tracey, J.B.; Tannenbaum, I.S.; & Kavanagh, J.M. (1995). Applying trained skills on the job: The importance of the work environment. Journal of Applied Psychology, 80(2), 239-252.

The Organizational Context of Learning and Performance in Four Retail Food Markets

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This paper reports the results of research which investigated how features of the organizational context in four retail food markets affected the learning and performance of their employees. One of the markets was a high performance workplace, in which principles that underlie new approaches to organizing and managing had been implemented successfully. The results suggest that it is feasible to implement a high performance, learning-oriented approach to organizing and managing in the low-wage service sector, but further research is needed to understand the conditions under which such systems can be successful.

In pursuit of higher performance and the ability to respond more rapidly to changing competitive conditions, many organizations are changing the way work is organized and people are managed. Although there are a variety of new approaches to organizing and managing, and an array of labels describing them—including high performance work systems and learning organizations—there is much convergence among them. Indeed, some have argued that there is a single deeper paradigm shift underlying many of the new approaches for successful organizing (Lawler, 1996).

The "new paradigm" is based on a set of ideas, a growing body of research findings, and accumulated learning from attempts to implement new systems, processes, and practices. Central to all of the approaches is the increasing recognition of the importance of human resources for performance and of the need for a comprehensive, integrated approach for successful organizational change and for sustained learning and performance.

A growing body of research has found that systems of interrelated and internally consistent work and human resource practices can have large, positive effects on diverse measures of organizational performance, including productivity, quality, innovation, cycle time, and customer satisfaction (Gephart, 1995; Kochan & Osterman, 1994). The strongest research evidence to date comes from the manufacturing sector, but there is growing evidence from case studies that similar principles can be successfully applied in services, government, and education.

There is considerable skepticism, however, about the efficacy of these new approaches in small business and in the low-wage service sector. The view is widespread that most small businesses cannot pursue a high performance, learning-oriented approach because they lack the time, staff and other resources needed or because they are too focused on short term survival to risk adopting practices that promise higher performance only in the longer term. Because these views are so prevalent, incentives have not been very successful in increasing the adoption of new approaches to organizing among small businesses or in the low-wage service sector in the U. S. economy.

Yet, because the new approaches to organizing offer the promise of committed, knowledgeable, and fulfilled employees, and of organizations that prosper, their successful implementation in the low-wage service sector might result in substantial benefits both for businesses and for their employees. It is commonplace for employers in that sector to decry the shortage of skilled workers, while their employees complain that their jobs are "dead end" and do not offer opportunities for individual or career development.

To date, we know very little about the feasibility of innovative work and human resource practices in the low-wage service sector. Studies are needed that can shed light on the crucial details of whether and how innovative practices and principles have been implemented successfully, and if so, how they operate and with what effects. Since many new jobs are created every month in the low-wage retail service sector, such research has potentially important

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implications for social action and policy. Research might conclude that the potential for success is indeed limited and the risks are great. Or, research might identify conditions for success, and stimulate the benchmarking and diffusion of best practices and role models. Given our interest in low-wage and relatively unskilled workers, we decided to begin this research with a study of retail food markets.

Theoretical Framework

Although there is no single agreed-upon definition of "the new paradigm" in organizing, nor any consensus about a fixed set of practices, there is considerable agreement about a core set of ideas and principles (Appelbaum & Batt, 1994; Gephart, 1995; Lawler, 1996). When the environment is changing rapidly, with more complex situations, products, and services, decision-makers at higher levels often lack the subtle knowledge that people who are closer to the problem have. Hence, people who are closer to the point of impact can make better decisions provided that work is organized so that they have the information and knowledge they need, they feel accountable, have the power and authority to act, and receive the feedback to assess the results of their decisions and take corrective action. In the "new paradigm," hierarchical control is replaced by commitment and self-regulation, enabling control to move to the point of impact. Information is widely shared. Authority to make decisions is distributed to wherever appropriate. Competence is widespread; people do multiple tasks as needed. Rewards are based on skills and accomplishments.

Organizations are viewed as sets of resources and competencies, and the focus shifts from structures, functions, and jobs to the processes through which products and services are created—processes to which people with different skills and disciplines must contribute. Only if an organization's systems are designed to support such processes, can the organization and its employees operate in a manner that produces superior performance.

A key principle in all of the new approaches to organizing is thus the need for effective internal alignment. Focusing control systems at the point of impact and organizing around lateral processes typically requires changing organizational and work structures, the way people are developed and managed, and an organization's information and communication systems.

People need to be viewed as resources whose knowledge and skill contribute to the organization's competencies and capabilities. Selection emphasizes finding people who fit the organization's skill needs and its learning environment, rather than people who fit specific job openings. Individuals selected need to develop the skills and knowledge that will enhance the organization's core competencies. Most learning occurs through work, and effective organizations create multiple opportunities for continuous learning. People are rewarded for performing well, but also for developing competencies and for teamwork.

These new principles of organizing enhance the ability of the organization, as a system, to learn (Gephart, Marsick, Van Buren, & Spiro, 1996). Learning processes are monitored, developed, managed, and aligned with improvement and innovation goals. Individuals and groups share their knowledge and learning with one another. Collective and organizational learning are facilitated by a culture that values and supports learning, collaboration, systems thinking, innovation, trust, openness and diversity; by leaders who create vision and model learning; by organizational structures and systems that remove barriers to learning and change, foster systems thinking and learning, cooperation and interdependence, as well as enable the capturing, sharing, and dissemination of practical new knowledge.

Research Questions

Drawing on these ideas, this study investigated the feasibility and operation of the following "new paradigm" principles of organizing in retail food markets:

- the philosophy that competitive advantage can be achieved through the strategic use of people
- the principle that work structures and processes are organized to maximize customer responsiveness and organizational learning
- human resource policies and practices—from selection and training, to compensation and career development—that seek to build employees' motivation, skill, and flexibility, and to align individual interests with those of the organization
- new approaches to leading and managing that are consistent with these philosophies, ways of organizing work, policies and practices

This study investigated whether these principles can be successfully implemented in retail food markets and how features of the organizational context in such settings affect the learning and performance of workers.

Methodology

The study employed a matched case study design. From an initial pool of eight retail food markets, we selected four (two matched pairs) that would enable us to compare the organizational features and management practices of markets which differed in the levels of their employees' performance, as assessed by customers, but were similar in their size, products, customers, and employee demographics.

Two of the markets selected were small retail food markets–fruit and vegetable markets that also carried a variety of specialty items such as cheese, smoked fish, coffee beans, etc. The other two were supermarkets, each of which was part of a larger chain. All four markets had diverse workforces and were located within a 10 block radius in a large Northeastern city. Customers who were interviewed in the initial phase of the research indicated that they frequently shopped in two or more of the four stores.

The research was undertaken in three phases, during the period from 1995 to 1997. In the first phase, researchers, in the role of participant-observer customers, visited each of the markets at a variety of different times of the day and days of the week. During those visits, they interviewed customers and observed the behavior of employees and managers. In the second phase, researchers interviewed employees; in the final phase, the senior researcher interviewed store managers.

The four markets were ranked according to their employees' performance overall, as assessed by customers who indicated how knowledgeable, responsive, and helpful [*very, somewhat, not very*] they found the employees in that store. When customers said that they shopped in more than one of the markets, they were asked to compare the performance of employees in the other markets with which they were familiar.

On the basis of this information, we were able to differentiate three levels of employee performance. Employees in one of the small markets were consistently rated very knowledgeable, responsive, and helpful. We rated that market "high" on employee performance and ranked it at the top of the group. Employees in the other small market and in one of the supermarkets received mixed, but overall positive ratings. We rated those two markets "medium" and ranked them in the middle of the group. Employees in the second supermarket received mixed, but generally negative ratings. We rated that market "low" and ranked it last.

Next, we investigated the extent to which, in each of the markets, (1) employees were viewed as competitive assets; (2) work structures and processes were organized to enhance customer responsiveness and organizational learning (3) employees were motivated and committed to the organization's goals; (4) employees were knowledgeable, skilled, and flexible; and (5) approaches to leading and managing were consistent with and supported these values and principles. We relied on a mix of direct observations and interviews with customers, managers, and employees for our data.

Results

The small market (market # 1) whose customers rated the employees' performance highly had many of the core characteristics that have come to be associated with high performance work system (Applebaum & Batt, 1994; Lawler, 1996) and learning organization (Gephart, Marsick & Van Buren, 1997; Watkins & Marsick, 1996) models. It was a fast-paced, very successful small market. High expectations and standards were shared by employees and managers. Employees had considerable autonomy and felt personal responsibility for satisfying customers, for their own performance, and for maintaining the reputation of the market. Employees' eagerness to learn was in the service of these goals. The culture supported cooperation and continuous learning. In contrast, the low performance supermarket (market # 4) was a classic control-oriented organization, characterized by autocratic management, destructive ethnic and racial conflict, and employee behavior that ranged from apathy to sabotage. The two medium performance markets represented more mixed cases. The medium performance small market (market # 3) had little competition in its immediate area, and the managers and workers had a relaxed attitude about performance standards. The medium performance supermarket (market # 4) was a cohesive and collegial workplace. But it was a store whose inventory of core products was irregular, and employees feared (correctly) that their branch of the chain had been slated for closing. Employees and managers were friendly and helpful to customers, but motivation and expectations for learning and performance were not high.

People as Competitive Assets We assessed the extent to which employees were viewed as competitive assets through observations and interviews with customers, employees and managers. Two scenes that were observed in all of the markets—customers requesting information and customers questioning prices—were revealing of the extent to which the philosophy that employees are competitive assets was the prevailing view in each market.

In market # 1, when customers requested information—usually about products, prices, or appropriate cooking techniques—the nearest employee was frequently able to provide the information requested. If not, he or she asked another employee, who nearly always knew the answer. Customers rarely questioned prices. The prices of cheese, deli, coffee, and other specialty items were marked by the employees who prepared them for the customers, and either prices or product codes were entered manually in point of sale registers by the checkers. The store did not use bar codes to scan prices, because, we were told, "that would lead to errors and delays. The checkers do better manually." In the interviews, employees and managers confirmed what researchers observed—that the performance and success of the market depended on the employees. A variety of well-priced, products of the highest quality were considered to be the necessary, but not sufficient conditions for competitive success. We were told that customers were always in a hurry and expected quick service without mistakes.

In the other small market (market # 2), neither the employees nor their managers viewed them as competitive assets. When customers requested information, employees frequently seemed confused. Often, they did not know the names or prices of products, and many customers had learned to ask the managers directly. When prices were questioned by customers, the checkers nearly always consulted the manager, who resolved any disputes with the customer.

In the medium performance supermarket (market # 3), although the employees and their managers thought the store's employees were an important asset, none of them believed that they could affect the things that mattered most to customers or to the future of the market. Employees were usually able to provide information requested by customers, and to resolve price questions easily. Managers were ready to provide help if needed.

In the low performance supermarket (market # 4), neither employees nor their managers believed that employees were a competitive asset. Customers rarely asked for information or challenged mistakes in prices. In response to our queries about price questions, one customer commented (and others nearby agreed): "The checkers are so hostile, it practically ruins your day to come in here. When they make mistakes I usually just let it go. It's not worth the hassle trying to do anything about it."

Work Structures and Processes Organized to Enhance Customer Responsiveness and Organizational Learning In each market, we observed work processes to assess whether and how they enhanced or impeded the markets' ability to respond to customer needs, wants, and complaints, and to incorporate feedback from customer behavior and views. We also asked employees and managers whether they could tell us what aspects of their products and services were valued and disliked most by their customers, and whether and how they kept abreast of customers' changing preferences. We compared their answers with the information obtained from their customers.

The high performance market (market # 1) had a very high volume of customers. Work processes were smooth and well organized; roles and responsibilities seemed clear, but flexible. Work processes, roles, and responsibilities were all focused on meeting the customers' needs. Lines at the check-out counters were often long, but they moved quickly. Customers told us they rarely waited more than five minutes to be served at a counter or to check out. Managers spent most of their time providing back-up support for employees—bagging at the checkout counters and removing carts and baskets as soon as customers had finished with them. Customers' major sources of frustration were the stress of shopping in such a crowded store and the rudeness of other customers. Employees who stocked shelves provided feedback about inventory levels, and changing customer preferences were discussed at employee meetings. Employees at the deli and cheese counters described new products to customers, offered free tastes, and monitored their likes and dislikes, as well as the volume and quantities of different products sold. It was not unusual for a group of customers to be gathered at the cheese counter discussing new cheeses and providing advice to each other, with occasional input from the well-informed employees. Employees and managers in this high performance market understood what their customers valued and disliked. Customers expected a variety of fresh, high quality products, at fair prices. Customers had come to expect nearly flawless service, and the occasional delays and confusion were met with surprise and impatience. Managers told us that employees often provided valuable suggestions about new products that customers wanted. The market has recently expanded, providing fresh fish, and more canned and prepared foods, in response to their customers' wishes for one-stop shopping, here, not elsewhere.

The volume of customers was much lower in the other small market (market # 2). Customers' views of this market were that they paid fairly high prices for a wide variety of products of mixed quality. Service was less efficient than in market # 1, and there were more delays and bottlenecks at the checkout counters. Customers' expectations were lower, however, and there were usually enough employees working to prevent lengthy delays. Customers considered the market's convenient location to be its main advantage. When they wanted superior products, they were likely to travel the extra half-mile to market # 1. As a place to stop for a few things on the way home from work, market # 2 met their needs. Employees and managers seemed surprised when we asked them if they knew what their customers valued and disliked about their products and services. Employees thought that the main problem for customers was that things were not well organized. Managers were aware of the products carried by competitor stores, but not of their customers' likes and dislikes.

In the medium performance supermarket (market # 3), the volume of customers was very low. The erratic supply of many products led customers to shop elsewhere, unless they were passing by and needed something. Employees and managers were as helpful as they could be to customers, but felt that they had no power to meet real customer needs. They thought that the store's moderate prices and their helpful and friendly attitudes were the market's main attractions to its customers. The customers whom we interviewed agreed. Work processes, roles, and responsibilities were formally and narrowly defined in this market, and there were lots of rules on the books, but most things were handled flexibly, with the support and encouragement of the managers.

In the low performance supermarket (market # 4), customers ranked many products high on quality and variety, but many customers said they shopped here as a last resort because the employees were "so hostile," and the prices were "through the roof". Customers reported that the checkers were slow, unfriendly, and certainly didn't care about customers. Checkers often left their registers to get change, and waited for the managers to appear to ask for price checks. When we asked employees if they knew what customers valued or disliked about the store's products and services, they returned incredulous glances. The managers recognized that the store didn't have enough business because of its pricing structure.

Employee Motivation and Commitment We assessed the extent to which employees were motivated and committed by observing their behavior and by interviewing them and their managers. Employees in the high performance market seemed actively and positively engaged in their work, although they complained that work was very stressful when the store was crowded with impatient customers. Most employees considered this market to be the best place they had ever worked, and many saw the opportunity to work in here as a critical step in their careers. Some said that when they left, they would be able "to write their own ticket." Previous employees were reported to be managing departments in other markets. When asked about their wages, some employees complained about the high taxes they had to pay. Employees were aware that the market provided critical opportunities for their learning and development, but they also thought the market was lucky to have them as employees. They worked hard, and felt that they played a critical role in sustaining the success and reputation of the market.

Employees in the medium performance small market were satisfied with their jobs—but for many, they were just jobs. Few had thought about the next steps in their careers, although some mentioned that there were other markets in their group where they could apply to work if they wanted to. Employees seemed motivated to be helpful to customers, but they did not see any need to learn more about products (that was the managers' responsibility), and they did not experience any pressure for higher performance.

Most of the employees in the medium performance supermarket had worked there for a long time. They enjoyed working with each other and liked their managers, but they would have preferred working where there were more opportunities for advancement. Employees were concerned about the quality of their own work, but felt that they did not have any challenging goals to work toward, and were somewhat disengaged as a result.

Most of the employees in the low performance supermarket were very disaffected. Employees who worked at the deli counter delighted in giving things away to customers, or charging less than the store price. The checkers, all of whom were females, seemed perpetually angry. They claimed that they were not paid as well as the men who worked in the store, although their work was more difficult. They told us that because the store was very cold, they needed to work in jackets. They claimed that the managers were always trying "to catch them at something." The employees, who were mostly African American and Puerto Rican, agreed that the managers, who were Caucasian, did not treat them with respect. Most employees believed that working in this supermarket was a dead end, and some said they were looking for another job.

Employee Knowledge, Skill, and Flexibility We assessed the extent to which employees were knowledgeable, skilled, and flexible by asking customers about their experiences, by asking managers for their assessments, and by observing employees directly, as they interacted with customers and with each other. Employees in the high performance market were very knowledgeable, skilled, and flexible. Those working in specialty foods—such as cheese, coffee, or the deli counter, had mastery knowledge of all the products and prices in their areas. Most other employees had specialized knowledge and skills as well, but many were trained in several areas and were thus able to fill in for co-workers. Employees throughout the store prided themselves on being able to answer any customer's questions.

In the medium performance small market, employees varied in their knowledge and skills. A few had been "eager to learn" and had taken advantage of all opportunities, while others were content to "get through their shift." Employees had fixed job definitions, and managers did not expect them to have extensive knowledge of products. So, there were few incentives or rewards for acquiring additional skills or knowledge, and few opportunities to learn new skills on the job.

Many employees in the medium performance supermarket were knowledgeable about the market's products and prices. There was a culture of cooperation and mutual support in the market, and employees were responsive and helpful to customers, but there were no incentives for acquiring more knowledge or skills. Despite fixed job descriptions, managers and employees were quite flexible in their day-to-day behavior.

In the low performance supermarket, most employees were not very knowledgeable or skilled. Those who worked at the deli and fish counters were exceptions, but because there were so few customers who purchased from those counters, there were few opportunities for them to use their knowledge or skills. The market used bar code price scanning for many products, but checker errors were still common. Formal job descriptions were fixed and narrowly defined, and managers did not encourage flexibility.

Approaches to Leading and Managing We assessed approaches to leading and managing by asking managers in each of the markets about their philosophies of managing, by asking employees and managers how work was monitored and supervised, and by observing interactions between managers and employees, and among employees.

Managers in the high performance market believed that the only way to satisfy their many, demanding customers was to hire good employees, train them well, rely on them and support them to make their work as easy as possible. The managers worked hard to make sure that correct prices were displayed for products and that price lists were up to date. From their perspective, it was not difficult to find good employees. New employees were frequently referred by current workers. The managers, and the owners, with whom we spoke, believed that most employees were eager to work in a stimulating environment and learn about the growing and competitive specialty retail food business. When asked about supervision and monitoring, managers and employees agreed that employees monitored each other. There was very little obvious hierarchy. Unless you knew who the managers were, you were likely to mistake them for regular employees.

Managers in the medium performance small market were often at the front of the store, ready to provide assistance or solve problems. When checkout lines became too long, they opened additional lines themselves. They told us that when the store first opened, it was difficult to find good employees. Even now, with a stable group of employees, they said ,"it's a lot to manage. Employees need a lot of direction and supervision. There is never enough time to keep price lists up to date... And we have a lot of problems to solve with unreliable suppliers."

Managers in the medium performance supermarket told us that their employees were easy to manage. Most of them had worked in the store for a long time, and they were competent and responsible. Managers reported that their greatest concern was that they were not able to influence the things that would attract more customers—the quality or steady supply of products. So, "we do what we can and hope for better days."

The managers in the low performance market reported that it was virtually impossible to find reliable workers. So, we were told, "they must be supervised very closely." Most days, the day-shift manager paced back and forth behind the checkers, smoking cigarettes with the "no smoking" signs prominently displayed nearby. He seemed angry that we were taking up his time asking questions. There was a lot of tension in the air, and our researchers did not enjoy being in the store.

Conclusions

The results of this research demonstrate that the principles underlying "new paradigm" approaches to organizing can be implemented successfully in a retail food market in the low-wage service sector. The results also help us to understand how features of the organizational context in the high performance market facilitated the learning and performance of its employees, and what were the consequences of the absence of those features in other markets.

Several characteristics of high performance market that were not analyzed in this paper, but affected its success, were unique to it. A steady supply of high quality products at fair prices was critical to the market's success. The market's produce came from its own farms, and two of the three owner-partners spent most of their time identifying high quality suppliers for other products. In addition, the partners who owned the market owned rather than rented the space in which the market was located. They had purchased the building at a time when property values were much lower than at the time of this study. Managers in one of the other markets reported problems with their suppliers, and all of the other markets paid high rents for their spaces. These characteristics underscore an issue that has been raised repeatedly in the literature on high performance work systems, namely, whether the feasibility of such systems depends on a certain level of competitive success and financial performance.

Additional research is needed to assess the extent to which high performance, learning-oriented workplaces exist in the low-wage retail service sector, and to develop a comparative profile of their characteristics. Additional research is also needed to understand the conditions under which such a system can be developed in other food markets or other kinds of establishments in the low-wage retail service sector.

References

Applebaum E. & Batt, R. (1994). *The new American workplace: Transforming work systems in the United States.* Ithaca, New York: ILR Press.

Gephart, M. A. (1995) The road to high performance. *Training & Development*, 49 (6), 29-44.

Gephart, M. A., Marsick, V. J., Van Buren, M. E. & Spiro, M. S. (1996). Learning organizations come alive. *Training & Development*, 50(1) 35-44.

Kochan, T. A. and Osterman, P. (1994). *The mutual gains enterprise: Forging a winning partnership among labor, management, and government.* Boston, MA: Harvard University Press.

Lawler, E. E. (1996). *From the ground up: Six principles for building the new logic corporation.* San Francisco, CA: Jossey-Bass.

Watkins, K. E. and Marsick, V. J. (1993). *Sculpting the learning organization: Lessons in the art and science of systemic change.* San Francisco, CA: Jossey-Bass.

Watkins, K. E. and Marsick, V. J. (1996). *In Action: Creating the learning organization, Vol I.* Alexandria VA: American Society for Training and Development.

Development and Validation of a Generalized Learning Transfer Climate Questionnaire: Final Report

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This study provides a final report on construct validation through common factor analysis of an expanded learning transfer climate instrument. Building on our earlier work, a third generation instrument was developed measuring 16 hypothesized constructs. The Learning Transfer Questionnaire (LTQ) was administered to 1616 employees from a wide range on organizations undergoing an assortment of training. Findings supported the hypothesized structure. The instrument development process, factor structure, and future research agenda are described.

Investment in training activities aimed at improving employees' job performance represents a huge financial expenditure in the United States. In 1997 organizations with more than 100 employees were estimated to have spent $58.6 billion in direct costs on formal training (Lakewood Research, 1997). With the inclusion of indirect costs, informal on-the-job training, and costs incurred by smaller organizations total training expenditures could easily reach $200 billion or more annually. Of this expenditure, as little as 10% is projected to pay off in performance improvements resulting from the transfer of learned knowledge, skills, and abilities to the job (Baldwin & Ford, 1988). Although the exact amount of transfer is unknown, the transfer problem is believed to be so pervasive that there is rarely a learning-performance situation in which such a problem does not exist (Broad & Newstrom, 1992).

Transfer of training can be defined as the degree to which trainees apply knowledge, skills, behaviors, and attitudes learned in training to their jobs. Transfer of training is traditionally seen as a function of three sets of factors: trainee characteristics, including ability, personality and motivation; training design, including a strong transfer design and appropriate content; and the work environment, including support and opportunity to use (Baldwin & Ford, 1988). Although a good deal of research has been done on design factors (Noe, 1986), significantly less has been done to understand how work environment factors influence transfer of training (Baldwin & Ford, 1988; Tannenbaum & Yukl, 1992).

One conceptualization of the manner in which work environment factors affect the transfer of learning to the job is through a transfer of training climate. Transfer climate is seen as a mediating variable in the relationship between the organizational context and an individual's job attitudes and work behavior. Thus, even when learning occurs in training, the transfer climate may either support or inhibit application of learning on the job (Mathieu, Tannenbaum, & Salas, 1992). Several studies have established that transfer climate can significantly affect an individual's ability and motivation to transfer learning to job performance (Huczynski & Lewis, 1980; Rouiller & Goldstein, 1993; Tracey, Tannenbaum, & Kavanaugh, 1995; Xiao, 1996). Although many authors support the

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importance of transfer climate, some stating it may even be as important as training itself (Rouiller & Goldstein, 1993), there is still not a clear understanding about what constitutes an organizational transfer climate (Tannenbaum & Yukl, 1992).

These findings point to the need to carefully consider how transfer climate is operationalized and how it can be measured validly and reliably. In recent transfer climate research, a wide variety of instruments have been used with measures ranging from single item scales used to quantify constructs, to multiple item, content validated but situation specific scales. This raises several concerns. First, the tendency toward custom designed scales for each study makes generalization of findings across studies questionable and conclusions about the latent construct structure of transfer climate difficult. Second, these studies often do not include factor analyses to validate hypothesized constructs. Third, some of the scales, particularly single item measures, have questionable psychometric qualities. Not surprisingly, different studies have produced a variety of conclusions about the relationship between transfer climate and performance, perhaps because of instrumentation differences. In a recent review, Ford & Weissbein (1997) report little progress in this arena.

What is needed, and should be an important research goal for HRD research, is the development of a valid and generalizable set of transfer climate scales. An established set of transfer climate scales with validated constructs and known psychometric qualities would facilitate valid cross-study comparisons and add significantly to our understanding of the transfer process. In addition, it would facilitate transfer research by reducing or eliminating the need for redundant instrument design.

Development of a general transfer climate instrument would not preclude the addition of situation specific scales. Rather, it would provide a foundation of validated constructs with established applicability across populations and settings. Research in organizational behavior, which produced a series of tested and generally accepted job attitude scales, provides a strong example of the value of such a goal.

From a broader perspective, defining and accurately measuring transfer of training climate is important because it helps HRD move beyond the question of whether training works to why training works (Tannenbaum & Yukl, 1992). For example, without controlling for the influence of transfer climate, evaluation results are likely to vary considerably and yield erroneous conclusions about the causes of intervention outcomes (Holton, 1996). A valid and reliable measure of transfer climate also has significant diagnostic potential: it can be used to identify when an organization is ready for a training intervention and can provide information to guide pretraining interventions aimed at increasing training effectiveness. From a theoretical perspective, identifying and measuring dimensions of the work context that impact use of learned skills and behaviors provides a more complete conceptual framework of training effectiveness.

The purpose of this research was to move toward the goal of a general transfer climate instrument. Earlier research (Holton, Bates, Seyler, & Carvalho, 1997a, 1997b), reported on an attempt to validate the transfer climate constructs and instrument proposed by Rouiller and Goldstein (1993). Significant differences were found in construct structure that led to the conclusion that Rouiller and Goldstein's constructs should not be the basis for a generalized instrument. The Holton et al. study factor analyzed an expanded transfer climate instrument incorporating several unexplored constructs. The nine factor solution that emerged indicated the presence of additional climate constructs and indicated that transfer climate was perceived according to organizational referent.

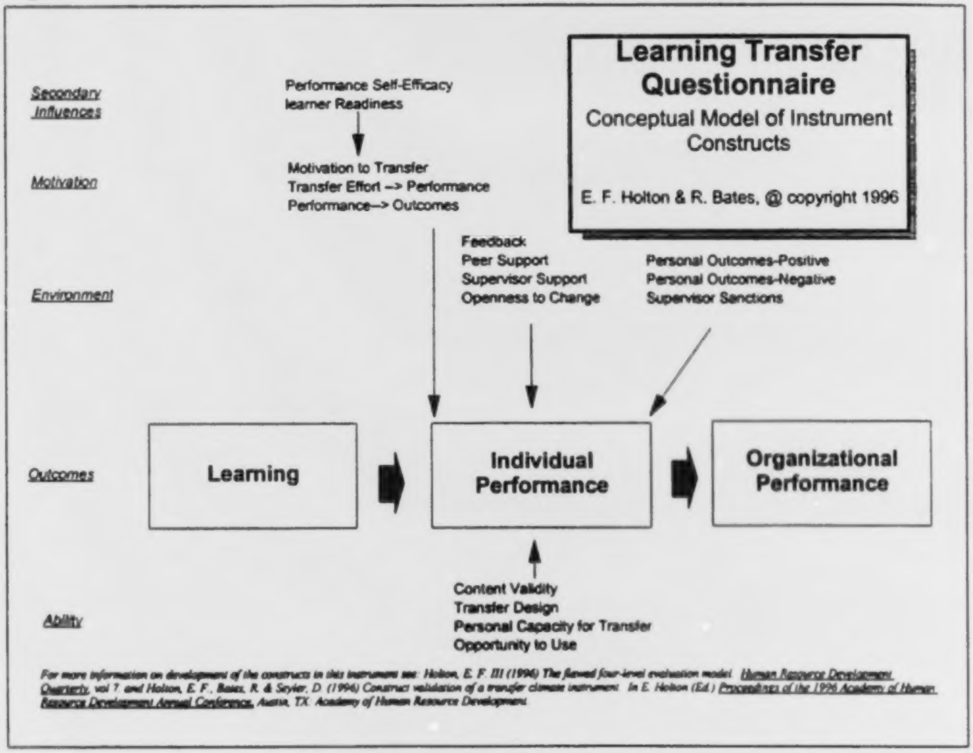
Holton, Bates & Leimbach (1997) reported on initial construct validation of an expanded learning transfer instrument building on (Holton et al., 1997a). Based on exploratory factor analysis from 320 respondents, they reported initial evidence of the Learning Transfer Questionnaire's viability. In addition, their preliminary report suggested a set of clean, interpretable transfer constructs could be identified and scales constructed to measure them.

This study continues this stream of research. The Learning Transfer Questionnaire used here is identical to the one used in the preliminary report (Holton, et al., 1997). It includes what are believed to be a comprehensive set of constructs affecting the potential for training to transfer to the job. As shown in Figure 1 below, Holton's (1996) proposed evaluation model was used as a conceptual base for the LTQ and was the model upon which the two studies cited above were based.

The primary purpose of this paper is to provide a final report on construct validation of the LTQ using factor analysis. More specifically, it addressed the following research question:

> *Research question*: Will exploratory factor analysis of the Learning Transfer Questionnaire (LTQ) result in an interpretable factor structure of latent transfer climate constructs?

Figure 1


Learning Transfer Questionnaire
Conceptual Model of Instrument Constructs
E. F. Holton & R. Bates, @ copyright 1996
Secondary Influences
Performance Self-Efficacy
learner Readiness
Motivation
Motivation to Transfer
Transfer Effort –> Performance
Performance–> Outcomes
Environment
Feedback
Peer Support
Supervisor Support
Openness to Change
Personal Outcomes-Positive
Personal Outcomes-Negative
Supervisor Sanctions
Outcomes
Learning
Individual Performance
Organizational Performance
Ability
Content Validity
Transfer Design
Personal Capacity for Transfer
Opportunity to Use

For more information on development of the constructs in this instrument see: Holton, E. F. III (1996) The flawed four-level evaluation model. Human Resource Development Quarterly, vol 7. and Holton, E. F., Bates, R. & Seyler, D. (1996) Construct validation of a transfer climate instrument. In E. Holton (Ed.) Proceedings of the 1996 Academy of Human Resource Development Annual Conference, Austin, TX: Academy of Human Resource Development.

Method

Instrument Development A pool of 112 items was generated to represent 16 hypothesized constructs. We began with the 64-item instrument that emerged from our previous work (Holton et al., 1997a) which had its beginning with the Rouiller and Goldstein (1993) instrument. This instrument had shown initial evidence of content, construct and criterion validity (Bates, Holton, & Seyler, 1997; Seyler, Holton, Bates & Carvalho, in press).

Because the instrument that emerged had a disproportionate numbers of items across constructs (e.g. 23 items measuring supervisor support), we first reduced the number of items by selecting only the highest loading items from its large scales. Next, we examined the literature to identify other constructs that had not previously been measured. Important additions included constructs such as performance self-efficacy, expectancy related constructs (transfer effort-performance and performance-outcomes), personal capacity for transfer, feedback/performance coaching, and general motivation to transfer. We then fit these constructs into the theoretical framework of the HRD Research and Evaluation Model (Holton 1996) as shown in Figure 1.

The items were divided into two sections. For the first section, containing 76 items representing 11 constructs, trainees were asked to consider the specific training program they were attending. The instructions for this section were to "think about this specific training program." Another 36 items, representing 5 constructs, were placed in the second section. Trainees were instructed to "think about training in general in your organization." Constructs in the second section included transfer effort-performance, performance-outcomes, openness to change, performance self-efficacy, and feedback/performance coaching.

Sample The LTQ was administered to 1,616 people in a wide variety of organizations and training programs (see Table 1). Because the purpose of this research program was to develop a generalized instrument that can be used across a wide range of training programs and organizations, the sample had been deliberately chosen to be as heterogeneous as possible. It includes respondents from a variety of industries including shipping, power, computer/precision manufacturing, insurance, chemical, industrial tool/construction, non-profits, and municipal and state governments. The municipal and state government classes were offered by a central training organization, so the classes included representatives from a wide variety of agencies and functions. A wide range of employees attended various training programs. These included secretaries, manufacturing operators, technicians, and engineers, managers, professionals, sales people, and law enforcement personnel. The training programs covered a wide variety of topics including sales, safety, volunteer management, project management, computer and technical skills, quality science, emergency medicine education, and various classes related to leadership, mid-management, and supervision.

Table 1- Selected demographics

Organization Type	*n*	%%	**Training Type**	*n*	%%
Government	676	41.8	Technical Skills	544	33.7
State (175)			Sales/Cust Serv	434	26.9
Local (501)			Volunteer Mgt.	192	11.9
For Profit Organization	432	26.7	Leadership/Mgt.	175	10.8
Non-profit Organization	192	11.9	Professional Skills	80	5.0
Public Training Classes (mostly for-profit)	316	19.6	Supervisory Skills	67	4.1
			Clerical	62	3.8
			Communication	44	2.7
			Computer	18	1.1
TOTAL	1616		TOTAL	1616	

Analysis. A central question for researchers developing instruments is whether to use exploratory (EFA) or confirmatory factor analysis (CFA) with structural equation modeling. Unfortunately, there are no generally accepted decision rules and there is continuing discussion about appropriate use of the two methods (Crowley & Fan, 1997; Holloway, 1995; Hurley, et al., 1997). Generally, CFA is driven by specification of a theoretically grounded structure of hypothesized latent variables and indicators. As such, it requires the presence of strong theory. EFA, on the other hand, makes no such presumption, even though items may have been derived from some conceptual framework. In its purest form, EFA makes no assumptions about the number of factors. In practice, CFA becomes exploratory when models are respecified, and EFA is used to confirm loosely constructed models underlying data. Anderson and Gerbing (1988) suggest that the two might be better viewed as an ordered progression. Bentler and Chou (1987) take a stronger position, suggesting that the measurement model in CFA should be based on well-known, exploratory factor analysis.

EFA was determined to be the best method at this stage from several perspectives. From a theoretical perspective, no strong theory exists in the general transfer literature. In addition, the specific model that guided instrument development had not been tested. From a statistical perspective, the following reasons also support the use of EFA at this stage:

1. EFA is considered more appropriate in early stages of scale development because CFA does not show cross-loadings on other factors (Kelloway, 1995).

2. EFA may be more appropriate for scale development (Hurley et al, 1997).
3. EFA provides a more direct picture of dimensionality (Hurley, et al., 1997).
4. The use of modification indices to alter models is an exploratory use of CFA and is not without controversy (Anderson & Gerbing, 1988) and may not be appropriate (Williams, 1995).
5. The use of maximum liklihood estimates for exploratory analysis is likely to result in biased parameter estimates (Brannick, 1995)

The EFA approach used here was common factor analysis because it is more appropriate than principal components analysis when the objective of the analysis is to identify latent structures, rather than for predictive purposes (Nunnally & Bernstein, 1994). An oblique rotation was used because it is also more appropriate for latent variable investigation when latent variables are expected to have some correlation.

Construct validation has traditionally consisted of establishing convergent and divergent validity with other constructs through correlational studies. More recently, factor analysis has been recognized as "a powerful and indispensable method of construct validation (Kerlinger, 1986, p. 427)" that "is at the heart of the measurement of psychological constructs" (Nunnally & Bernstein, 1994, p.111). The combination of common factor analysis with convergent and divergent validity studies results in a more complete construct validation.

The items in the two sections of the instrument represented two distinct construct domains: specific transfer climate and general transfer climate. They were therefore factor analyzed separately with 76 items pertaining to the specific training program in one pool, and 36 items pertaining to general transfer climate in the second pool.

The large sample (1616) resulted in a respondent to item ratio of 21.3:1 for specific training items, and 44.9:1 for general climate items. Generally a ratio of between 5:1 to 10:1 is desirable (Hair, Anderson, Tatham, & Black, 1995). This sample would therefore be considered to have strong respondent to item ratios.

Results

EFA resulted in an exceptionally clean and interpretable sixteen factor structure that closely mirrored that of the hypothesized factors (see Table 2). The average loading on the major factor was .62 with only a .05 average loading on non-major factors. Cronbach alpha reliabilities ranged from .63 to .91, with only three of the scales below .70 (α = .63, .68, & .69). One scale, supervisor sanctions, was substantially below the .70 minimum recommended by Nunnally & Bernstein (1994) for early stage instruments. Definitions for each factor are also shown in Table 2.

As might be expected from an early stage instrument, a number of items did not load on any factor, others loaded weakly, and some loaded on different factors than hypothesized. This confirms the importance of using EFA in early stages of instrument development. While the hypothesized factor structure was ultimately supported, significant modification to the measurement model was necessary. CFA also could have missed the items that loaded on different factors. Table 3 shows the interfactor correlations. Only a few correlations exceeded .30, further emphasizing the conceptual distinction between the factors.

Discussion/Implications

As HRD shifts toward performance management, measurement of transfer climate will become more important. Validation studies such as this are important to develop standard instruments to measure climate across multiple organizations and intervention types. With psychometrically strong instrumentation, HRD will be in a position to provide more definitive answers to questions about the nature of training transfer and about barriers and enablers to transfer in the work environment.

Table 2 – LTQ Factors,

FACTOR	DEFINITION	NUM ITEMS	α	AVG LOAD-MAJOR FACTOR	AVG LOAD-MINOR FACTOR
SPECIFIC SCALES					
Learner Readiness	The extent to which individuals are prepared to enter and participate in training	4	.73	.64	.04
Motivation to Transfer	The direction, intensity, and persistence of effort toward utilizing in a work setting skills and knowledge learned.	4	.83	.65	.04
Positive Personal Outcomes	The degree to which applying training on the job leads to outcomes that are positive for the individual.	3	.69	.56	.05
Negative Personal Outcomes	The extent to which individuals believe that applying skills and knowledge learned in training will lead to outcomes that are negative.	4	.76	.65	.04
Personal Capacity for Transfer	The extent to which individuals have the time, energy and mental space in their work lives to make changed required to transfer learning to the job.	4	.68	.56	.04
Peer Support	The extent to which peers reinforce and support use of learning on the job.	4	.83	.66	.04
Supervisor Support	The extent to which supervisors/managers support and reinforce use of training on the job.	6	.91	.75	.04
Supervisor Sanctions	The extent to which individuals perceive negative responses from supervisors/managers when applying skills learned in training.	3	.63	.46	.06
Perceived Content Validity	The extents to which trainees judge training content to accurately reflect job requirements.	5	.84	.58	.05
Transfer Design	The degree to which 1) training has been designed and delivered to give trainees the ability to transfer learning to the job, and 2) training instructions match job requirements.	4	.85	.70	.03
Opportunity to Use	The extent to which trainees are provided with or obtain resources and tasks on the job enabling them to use training on the job.	4	.70	.54	.06
GENERAL SCALES					
Transfer Effort–Performance Expectations	The expectation that effort devoted to transferring learning will lead to changes in job performance.	4	.81	.65	.05
Performance-Outcomes Expectations	The expectation that changes in job performance will lead to valued outcomes.	5	.83	.65	.06
Resistance/Openness to Change	The extent to which prevailing group norms are perceived by individuals to resist or discourage the use of skills and knowledge acquired in training.	6	.85	.70	.04
Performance Self-Efficacy	An individual's general belief that they are able to change their performance when they want to.	4	.76	.58	.08
Fdbk/Performance Coaching	Formal and informal indicators from an organization about an individual's job performance.	4	.70	.56	.08

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Table 3 - Inter-factor Correlations

Specific Scales	1	2	3	4	5	6	7	8	9	10	11
1-Learner Readi	1.00										
2-Mot to Trans	.15										
3-P O Pos	-.05	-.25									
4-P O Neg	-.16	.05	.20								
5-Pers Capacity	.22	.26	.00	-.06							
6-Peer Support	.25	.28	-.03	-.17	.25						
7-Sup Support	-.17	-.17	.28	.19	-.24	-.31					
8-SupSanctions	.11	-.05	.12	.04	.14	.21	-.20				
9-Content Valid	-.30	-.33	-.02	.12	-.30	-.30	.24	-.10			
10-Transfer Desgn	.19	.43	-.02	.05	.22	.31	-.11	.00	-.48		
11-Opp to Use	-.14	-.22	-.02	-.10	-.40	-.25	.15	-.26	.29	-.31	

General Scales	12	13	14	15	16
12-Transfer Effort Perf Expect	1.00				
13-Perf Outcome Expect	.41				
14-Res/open Change	-.15	-.37			
15-Perf Self Efficacy	-.24	-.14	.28		
16-Fdbk/Perf Coaching	.34	.47	-.31	-.15	

Without strong instrumentation, researchers will be limited in their ability to arrive at general conclusions and prescriptions about transfer climate because there will always be a question as to the extent to which measurement error contributes to the findings.

This instrument is the only one known to the authors that has received this type of construct validation. Exploratory factor analysis revealed a clean interpretable factor structure. One strength of this analysis is that it is based on a very large and extremely diverse sample. This provides a high level of confidence that the instrument will work well across most types of training and in most organizations. Of course factor analysis only provides a measure of construct validation for the instrument. Criterion validation studies as well as convergent and divergent validation are needed to further refine the instrument. The authors are also testing new items to strengthen the reliabilities of certain scales.

This study has firmly established that an instrument to measure transfer climate factors can be developed with rigorous psychometric procedures. It is incumbent upon transfer researchers to stop using weak, unvalidated measures of transfer climate in order to advance the theory of training transfer. With such an understanding, practitioners can turn their attention to managing transfer conditions in organizations to enhance performance outcomes of training.

References

Anderson, J. C. & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. Psychological Bulletin, 103, 411-423.

Baldwin, T. T., & Ford, J. K. (1988). Transfer of training: A review and directions for future research. Personnel Psychology, 41, 63-105.

Bates, R.A., Holton, E.F. III, & Seyler, D.L. (1997). Factors affecting the transfer of training in an industrial setting. In R. Torracco (Ed.), Proceedings of the 1997 Academy of Human Resource Development Annual Conference, Baton Rouge, LA; Academy of HRD.

Bentler, P. M. & Chou, C. P. (1987). Practical issues in structural modeling. Sociological Methods & Research, 16, 78-117.

Brannick, Michael T. (1995). Critical comments on applying covariance structure modeling. Journal of Organizational Behavior, 16, 201-213.

Broad, M. L., & Newstrom J. W. (1992). Transfer of training: Action-packed strategies to ensure high payoff from training investments. New York: Addison-Wesley Publishing

Company.

Crowley, S. L. & Fan, X. (1997). Structural equation modeling: Basic concepts and applications in personality research. Journal of Personality Assessment, 68, 508-531.

Ford, J. K. & Weissbein, D. A. (1997). Transfer of training: An update review and analysis. Performance Improvement Quarterly, 10(2), 22-41.

Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1995). Multivariate data analysis (4th ed.). Englewood Cliffs, NJ: Prentice Hall.

Holloway, E. K. (1995). Structural equation modelling in perspective. Journal of Organizational Behavior, 16, 215-224.

Holton, E. F. III, Bates, R. A., & Leimbach, M. (1997) Development and Validation of a Generalized Learning Transfer Climate Questionnaire: A Preliminary Report. In R. Torraco (Ed.) Proceedings of the 1997 Academy of Human Resource Development Annual Conference, Baton Rouge, LA: Academy of Human Resource Development.

Holton, E. F. III, Bates, R., Seyler, D., & Carvalho, M. (1997a) Toward construct validation of a transfer climate instrument. Human Resource Development Quarterly, 8, 95-113.

Holton, E. F. III, Bates, R., Seyler, D., & Carvalho, M. (1997b) Reply to Newstrom and Tang's Reactions. Human Resource Development Quarterly.

Holton, E. F. (1996). The flawed four level evaluation model. Human Resource Development Quarterly, 7, 5-21.

Huczynski, A. A., & Lewis, J. W. (1980). An empirical study into the learning transfer process in management training. The Journal of Management Studies, 17(2), 227-240.

Hurley, A. E, Scandura, T. A., Schriesheim, C. A., Brannick, A. S., Vandenberg, R. J., & Williams, L. J. (1997). ____, Journal of Organizational Behvior, 18, 667-683.

Kelloway, E. K. (1995). Structural equation modelling in perspective. Journal of Organizational Behavior, 16, 215-224.

Kerlinger, F. N. (1986). Foundations of behavioral research (3rd ed.). Fort Worth, TX: Holt, Reinhart and Winston.

Lakewood Research. (1997). Training industry report: 1997. Training, 10, 34-75.

Mathieu, J E., Tannenbaum, S. I., & Salas, E. (1992). Influences of individual and situational characteristics on measures of training effectiveness. Academy of Management Journal, 35(4), 882-847.

Noe, R. A. (1986). Trainee's attributes and attitudes: Neglected influences on training effectiveness. Academy of Management Review, 11(4), 736-749.

Nunnally, J. C., & Bernstein, I. H. (1994). Psychometric Theory. New York: McGraw-Hill.

Rouillier, J. Z., & Goldstein, I. L. (1993). The relationship between organizational transfer climate and positive transfer of training. Human Resource Development Quarterly, 4(4), 377-390.

Seyler, D., Holton, E. & Bates, R., Carvalho, M. (in press). Factors affecting motivation to transfer computer based training. In R. Torracco (Ed.), International Journal of Training and Development.

Tannenbaum, S. I., & Yukl, G. (1992). Training and development in work organizations. Annual Review of Psychology, 43, 399-441.

Tracey, J. B., Tannenbaum, S. I., & Kavanaugh, M. J. (1995). Applying trained skills on the job: The importance of the work environment. Journal of Applied Psychology, 80(2), 239-252.

Williams, L. J. (1995). Covariance structure modeling in organizational research: problems with the method versus applicatoin of the method. Journal of Organizational Behavior, 16, 225-233.

Xiao, J. (1996). The relationship between organizational factors and the transfer of training in the electronics industry in Shenzhen, China. Human Resource Development Quarterly, 7(1), 55-86

Creating a Systemic Framework for the Transfer of Learning from an Action Learning Experience

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Action learning is a method of learning in groups while solving real problems to bring about learning and organizational change. It builds new relationships among organizational members and organizational elements. The research questions herein seek to describe those organizational elements that affect learning and the transfer of learning in the organization. This study identified patterns that emerged from the research and identified directions for future research about transfer of learning from an action learning experience.

Many influences related to the individual and his/her workplace can promote, deter, or filter the acquisition and transfer of new knowledge. This has been well documented in the research on transfer of training. Education programs are not successful and individuals may not be motivated to learn or to apply new knowledge if they are not aware of and in a position to capitalize on, manage, or neutralize these influences. Action learning is a nontraditional more open framework of learning with nontraditional, and possibly latent and/or intangible outcomes. This can result in problems when trying to use newly-learned action learning principles in an organization. As a result, the transfer of learning can be more unpredictable, complicated, and potentially threatening. Meaningful transfer of knowledge gained through action learning, however, can be more rewarding, boundaryless, and generalizable than conventional classroom training for the participant and for the respective organization.

Theoretical framework

Several theory bases seem to be useful for looking at the subject of transfer of learning and this study of graduate students in an action learning experience. These are action learning itself, transfer of training, systems thinking, and organizational behavior.

Action Learning. As originally proposed by Reginald Revans (1971, 1982), action learning is a framework wherein individuals learn best from each other while working on significant, real-life problems through questioning insight and programmed knowledge (traditional instructor-centered learning only as ancillary assistance). Insightful questioning relates to Revans' "fresh questions" which are probing questions to stimulate creativity, discovery, re examination of underlying assumptions, and experimentation. Programmed knowledge is information that is generally accepted to be true. Subsequently, Marsick (1991) emphasized the role of critical reflection in the action learning framework. Learning occurs in facilitated or unfacilitated action learning sets (groups), meeting periodically over several months to identify and resolve the problem brought forth by a participant who is responsible for and can do something about it. In between set meetings, problem owners test out new knowledge gained from the set, monitor results, and engage in critical reflection to appraise the results. The benefit of action learning occurs by balancing learning, problem solving, and the application and transfer of learning. As a result, action learning is a powerful personal, professional, and organizational development methodology which *reaches* beyond one's conscious belief and knowledge awareness through critical reflection. It challenges one's assumptions about pre existing theories of his/her world.

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Considering the rate of change in our world, what we knew yesterday may not resolve today's problems but instead disrupt the system's steady state. Therefore, action learners continuously questions their own and others' expertise, resulting in continuous learning. It provides a framework to use across a variety of problems and disciplines.

Transfer of Training. As defined by Broad and Newstrom, transfer of training is "the effective and continuing application, by trainees to their jobs, of the knowledge and skills gained in training -- both on and off the job" (1992, p. 6). They additionally asserted that HRD professionals express great concern that most investments in training do not generate sustained positive transfer of new knowledge to the job. Baldwin and Ford proposed that "For transfer to have occurred, learned behavior must be generalized to the job context and maintained over a period of time on the job." (Baldwin & Ford, 1988, p. 63).

Transfer of learning from an action learning experience is the specific issue explored in this study. With the exception of ARL™ Inquiry (1996), there has been little research with this specific focus. Previous research efforts related to the transfer of training (Baldwin & Ford, 1988; Cormier & Hagman, 1987; Dweck, 1986; Huczynski & Lewis, 1980; Jeris, May & Redding, 1996) have been instrumental in providing a knowledge base (related to conventional training) from which to springboard to the subject of transfer of nontraditional learning from an action learning experience.

Systems Thinking. General systems theory provides a framework within which to study an organization, the organization's environment, and its interactive elements. More specifically, a systems thinker views an organization (system) and its environment holistically with interrelated and interdependent elements. These elements together effect some result synergistically greater than the total of its elements acting singularly or simultaneously (Checkland, 1972). A disturbance (i.e. the introduction of something new) from within or outside the system can influence another element and can cause ripples throughout the entire system. Additionally, Zulauf (1995) suggests that systems thinkers would not limit themselves to just one cause of a problem. They would survey all possible causal elements of a problem otherwise perceived as distinct phenomena to more fully understand the system. This notion relates to the systems theory concept of equifinality suggested by von Bertalanffy (1969). In effecting any change or resolving any problem, the whole system must be considered (Flood, 1995). Checkland presented the concept of "appreciative systems" (1972, p. 56) whereby individuals develop, through experience, a readiness to be keenly observant to specific or anomalous situations within a system in order to resolve disturbances to sustain the system's steady state.

As it relates to human resource development, McLagan (1989) suggested that general system theory is a significant framework for the human resources developer to provide a holistic approach to building knowledge into the parts of the system versus a limited discipline-specific approach. It allows for the consideration of the goals, values, and other attributes of the system, its individuals, its environment, and its reciprocal nature as a framework for constructing development activities. Willis (1997) defines the field of HRD itself as an evolutionary system.

The final concept within systems theory considered in this study is that of "purpose". Bertalanffy (1969) stated that all systems have a purpose or a goal to strive to attain. This purpose is what provides the system its vitality and its dynamic homeostasis for improvement and growth.

Organizational behavior Bolman and Deal's (1991) four organizational frames were used to examine the system as a whole. These organizational frames, developed from significant organizational theory and research are: structural, human resource, political, and symbolic. Bolman and Deal developed these four frames to provide organizational members with different perspectives from which to view phenomenon within their systems. These frames provide the guidance for organizational members to stretch out of their comfort zone to examine phenomena from a different perspective.

The structural frame refers to the context within which organizational members work. It is concerned with the division of labor (the definition and coordination of work), efficiency, authority, hierarchy, and rational behavior.

The human resource frame refers to the characteristics, traits, personality, and personal agendas of organizational members. It also refers to the members' technical ability, learning ability, needs, motivation, emotions, and sense of job security. Career opportunities, incentives (or lack thereof), goal congruence and "fit" with the organization are also paramount.

The political frame refers to how different groups vie for and use power and the organization's scarce resources. Included in this is how coalitions develop to accomplish goals, influence as a part of the white space of the organization chart, informal leadership, identification of scarce resources, conflict, and human cost.

The symbolic frame refers to how organizations operate based upon the meaning of subcultures, rituals, ceremonies, stories, and heroes (tribal phenomena) rather than bureaucratic determinants. Bolman and Deal asserted that organizational members often tend to use this frame to mediate or deal with complexity and ambiguity or to avoid facts and logic. These four frames, then, provide the systemic framework from which to explore the elements that influence an individual's motivation to learn about action learning, to apply it to resolve an intractable problem, and then to apply the framework of action learning to other business operations/problems.

Research Questions

The purpose of this qualitative study was to collect preliminary data on the acquisition of new knowledge and translation of learning from an action learning experience. Guiding questions were: 1) What types of learning are identified in an action learning experience? 2) Within the framework of Bolman and Deal's four organizational frames, what do the action learners think they can carry back to use in their organizational lives? and 3) Within the framework of Bolman and Deal's four organizational frames, what are the elements that deter and/or enhance the translation of learning from an action learning experience?

Methodology

Participants. Twelve graduate students in a university action learning class served as a purposive sample of professionals in this study. The professional background of these individuals were varied. The participants worked in school systems, other universities, or major corporations in various capacities. Additionally, the participants were either master or doctoral students, with diverse educational backgrounds.

Data Collection. One of the assignments for this class was to participate in one of three action learning sets with an external problem owner/client with a significant operating issue. The problem owners consisted of a member of management from a power company, a member of management from a bank, and a member of one of the branches of the armed forces.

Participants completed three questionnaires during the quarter while participating in the class and their action learning sets, with the final questionnaire administered during the final week of the quarter. Questions related to motivation for taking and learning in the class, action learning behaviors that the participants believed that they could engage in, and organizational elements that the participants believed deterred or facilitated the use of action learning principles.

Data Analysis. The responses were collectively analyzed by the three author/researchers. General patterns were identified with concentration placed on those that related to the above-mentioned research questions. Responses were then grouped under headings identified for these patterns.

Preliminary Results and Conclusions

First Research Question. The major elements related to the first research question involve the participants' motivation to take the action learning class and to learn in this class. For both, the search for a new, universally applicable mental model and/or technique was the pattern around which the responses were clustered. The respondents cited curiosity about learning in nontraditional ways, action integrated with learning, and the freedom to learn. It was clear from their responses that the participants were seeking either a model or technique that was very different from what they normally encounter in their organizations, and one which could overarch all facets of organizational life. Representative comments were:

> In my organization, change is being thrust upon us and organization members are learning [that] the accepted, traditional ways of operating are not always the best.

> ...I saw immediate application to my organization and to me personally as a person and as a member of the organization. I thought it would teach me how to help others question their own thinking. I thought it would help me question mine. I thought that I might be able to engage groups of key problem solvers in my organization in an approach to thinking and asking, learning - that truely led to new approaches.

An unexpected finding was that several of the participants became curious to enroll and were motivated to learn because of other action learning leaders and peer graduate students. Some were motivated by previous action learning seminars (the 1997 AHRD pre-conference and Georgia State University seminars).

Regarding the types of learning that occurred, two types were cited. The first related to the principles of action learning. The most cited principle was that individuals can best resolve their problems through questioning insight instead of reliance on "P" (expertise and programmed knowledge); that sometimes "P" is irrelevant. This is exhibited by these comments:

> ... organizations are so into "P" for solving their problems, that they lose sight of the "Q" -- the questioning that is so desperately needed in order to solve real problems in real time. "P" is yesterday's news, but "Q" gets you to the point of change at present--what's happening now.
> In my organization we are afflicted with too many experts who have done things the same way for decades... Action learning provides us a golden opportunity to look at change from non-expert eyes. This is what my organization has needed for some time.
>
> When I do not have to be the expert, I create my best work. ... By being a non-expert I put less pressure on myself, allowing me to be more productive...
>
> When do I assume the expert [role], which limits my capacity to learn, change, and grow?

Some of the participants remarked that when they recognized the over-reliance on expertise, they were then able to more clearly understand and see the need for "fresh questions," the next most cited principle of action learning.

Recognizing the power of learning to use insightful questions was discussed by the majority of the participants. Asking fresh, insightful questions was also the one action that the participants felt that they could immediately start doing in both their personal and professional lives. The purpose was to re examine the value of expertise and programmed knowledge and to get at heart of some issue of concern to them. Some representative comments were:

> ... action learning works well by asking questions and generating thoughts which may reach deeper into the eye of the problem.
>
> ... not always easy to stay out of the expert role. Refraining from giving advice and probing a problem owner to question different angles takes restraint and constant reflection.... A "foolish" question from one set member may spark a new perspective in the problem owner's mind.
>
> Questions that lead to learning can't be questions that lead to one answer. The questions that lead to learning are those that stimulate thinking and that stimulate questions.
>
> From this trust will hopefully come the real questioning and insight that needs to happen in order to get at the real problem and at the ... solution.
>
> Within my own organization I realized that I should stop being such the expert and start asking more questions.

The second type of learning was about the self. These were sometimes referred to as "breakthrough," with some being intensely personal. This type of learning generally clustered around a new awareness of the impact of reactions and interaction; assumptions; ethics; and the liberation from canned or programmed viewpoints and problem solving. Examples of this are:

> One significant discovery has been the extent to which my own assumptions, frame of reference, and world view impact how I approach problems ... But I find that my level of awareness about this has been increased, and I've become more reflective about what I say and what I think and why. I also find I want to ask others what's "behind" the statements they make.
>
> I am also learning more about my reactions during set meetings and how they can affect the questioning, interaction between other group members.
>
> Action learning is a great way to really re-evaluate ones self--your actions, ideas, and beliefs. It has helped me to focus in more on what I believe, while teaching me that what I believe should be questioned (often) and that my opinion is not necessarily the only or right opinion.
>
> One significant discovery ... has been about my own values and ways of looking at situations or tasks. Much of my career has required me to learn models and techniques causing me to look at problems in a linear fashion. Action learning has freed me from this programmed box to view a problem in a less structured manner.
>
> I saw a pattern in my mental model that I really was not consciously aware of before. I realized how much of my life and adult relationships were influenced by it. It was a sobering insight, yet freeing in that I saw where I had responsibility and played a part.

It appears that the greatest learning occurred as a collaborative effort (both in the classroom as a set and during the client action learning set meetings) – a shared learning. This appeared to develop into trust which participants believed to lead to insightful questioning and real breakthrough. In general, the most profound comments related to personal learning issues.

Second and Third Research Questions. These questions related to what the action learners think they can transfer to their organizations and what they consider to be barriers and facilitators in their efforts. Participants generally recognized ways that they could champion and model the principles of action learning in their organizational and personal lives. These ways ranged from informal activities within their own departments to formal inclusion in management development programs. The majority of the participants believed they could immediately start to create an action learning environment within their own work groups by assuming a non-expert role and asking fresh questions instead of just giving out answers.

Structural frame. The following organizational characteristics were cited as important to consider for informal and/or formal translation of action learning: the rigidity/flexibility of the organization, size, hierarchy, rate of innovation, rules, policies, significance of the problem, and use of committees/staff meetings. The more rigid a structure with centralized decision-making, the more difficult it would be to implement action learning. A smaller size organization or scope of implementation may facilitate its implementation. One respondent felt she could implement action learning because her organization was small; another felt she could implement action learning in "pockets" because her organization has a management development program developed around unfamiliar problem solving.

The structural frame also concerns organizational members' roles in the organization. Several participants responded that they now wanted to modify others' expectations of their roles from the expert with the right answers to "an empathetic listener and ignorant questioner". These respondents believed that asking fresh questions would stimulate the problem owner to solve his/her own problem. Additionally, one participant noted that the military could conduct action learning projects with no displays of rank to facilitate the process.

The relative importance of the problem (the need) to the organization's goals and the desire to change were seen as critical by some of the participants. These respondents believed that the best opportunity for using action learning was when changes were being forced upon them from external sources and when the problem situation was in a crisis state. The organizational focus on quick fixes and fast results was emphasized by the majority of the participants as a major barrier to implementation and translation of action learning.

Human Resources Frame. The participants generally appeared to achieve validation for or breakthrough to their belief that other organizational members are responsible for solving their own problems. Over the period of the class quarter, the participants more fully perceived their role as asking insightful questions to help others to solve their own problems. The organizational elements that facilitate this are the freedom for members to act and make decisions, a reward system that encourages and rewards innovation, a participative culture, suspension of disbelief, and information distribution about action learning. Barriers noted were self-limiting behavior, dominance of expertise and programmed knowledge, limited opportunity for and expectation that employees think and experiment, the tendency to hide problems instead of confronting them, and punishing mistakes.

Political Frame. The majority of the participants noted the importance of obtaining upper management support for formal usage of action learning principles. Other issues of concern were: upper management's openness and willingness to release control and decision making and organizational members' willingness to take risks to expose problems that may have negative effects on them. One participant was particularly sensitive to postponing an introduction of action learning until the "right" problem owner surfaced.

Symbolic Frame. As it relates to this study, this frame represents how organizational members place meaning on events or phenomena. Specifically, several participants commented on some of the traditions of their own and others' organizations (success stories) and how these would impact the use of action learning. Some commented that because the organization used some of the principles of action learning (without knowing it), action learning might be more readily accepted. Cited were: the use of non-expert committees and staff meetings to solve problems and questioning of past practices. Several participants also remarked that the knowledge of successes of other organizations using action learning would be extremely important in implementing action learning in their own organizations.

Discussion

This particular study originated to investigate contextual learning and what organizational elements deterred or facilitated transfer of that learning to the workplace. Many of the remarks, and the most impressive, related to personal learning and overcoming one's own barriers and dissonant mental models. It appeared this had to be done before the participants were able to moderate the barriers and capitalize upon the facilitating elements of the organization to use action learning principles successfully in the workplace. Action learning, in effect, had to become a way of personal way to life - almost a value before it could be effectively translated to the workplace according to a majority of the participants. The overriding belief at the end of the study was that others do have responsibility for solving their own problems. The participants saw their new role as supporting others by modeling action learning principles, liberating them from having to be the expert with all the "canned" answers.

Another major theme emerged from the data. Most of the participants cited the lack of adequate time because of the extensive focus on quick results as a barrier to formally implementing action learning in an organization. However, most of these same participants indicated that they could immediately engage in it in informal ways. As a result, there may be more value (and immediate value) to action learning than previously thought.

Limitations and Suggestions for Future Research

This preliminary study sought only to identify the types of learning and organizational elements that deter or facilitate the translation of action learning. There has been little research related to these topics. Future research studying a larger number of subjects and over a longer period of time would provide a greater depth of clarification and understanding. Future research could more fully explore the personal phenomena identified in this study as this appeared to be of utmost concern to the majority of the participants. Further study of the identified organizational elements would provide action learners with guidance and insights to overcome barriers and capitalize on facilitators to enhance systemic organizational change and organizational learning. Finally, further study could explore the ways and successes of action learners who informally use action learning principles in their organizations.

References

ARL Inquiry. (1996). Developing an infrastructure for individual and organizational change: Transfer of learning from an action reflection learning program. Paper presented at the Academy of Human Resource Development, Minneapolis, Minn.

Baldwin, T. T., & Ford, J. K. (1988). Transfer of training: A review and directions for future research. Personnel Psychology. 1, 63-105.

Bolman, L. G., & Deal, T. E. (1991). Reframing organizations: Artistry, choice, and leadership. San Francisco: Jossey-Bass, Inc.

Broad, M. L., & Newstrom, J. W. (1992). Transfer of training. Reading, Mass.: Addison-Wesley Publishing Company, Inc.

Checkland, P. B. (1972). Towards a systems-based methodology for real-world problem solving. Journal of Systems Engineering. III(2), 51-77.

Cormier, S. M., & Hagman, J. D. (Eds.). (1987). Transfer of learning. Contemporary research and applications. San Diego: Academic Press, Inc.

Dweck, C. S. (1986). Motivational processes affecting learning. American Psychologist. 41(10), 1040-1048.

Flood, R. L. (1995). An improved version of the process of total systems intervention (TSI). Systems Practice. 8(3), 329-333.

Huczynski, A. A., & Lewis, J. W. (1980). An empirical study into the learning transfer process in management training. Journal of Management Studies, 227-240.

Jeris, L. S., May, S. C., & Redding, J. C. (1996). Team learning: Processes, Interventions and assessments. Paper presented at the Academy of Human Resource Development, Minneapolis, Minn.

Marsick, V. J. (1991). Action learning and reflection in the workplace. In J. Mezirow (Ed.), Fostering critical reflection in adulthood, (pp. 23-46). San Francisco: Jossey-Bass Publishers.

Marsick, V. J., & Watkins, K. E. (1997). Case study research methods. In R. A. Swanson & E. F. I. Holton (Eds.), Human resource development research handbook, (pp. 138-160). San Francisco: Berrett-Koehler Publishers.

McLagan, P. A. (1989). Systems model 2000: Matching systems theory to future HRD issues.

Revans, R. W. (1982). The origins and growth of action learning. London: Chartwell Bratt.

Revans, R. W. (1971). Developing effective managers. New York: Praeger Publishers.

Willis, V. J. (1997). HRD as evolutionary system: From pyramid-building to space-walking and beyond. Paper presented at the Academy of Human Resource Development, Atlanta, Ga.

Zulauf, C. A. (1995,). Developing systems thinking ability in organizations. Paper presented at the Academy of Human Resource Development, St. Louis, Mo.

Verifying Themes in Action Learning: Implications for Adult Education and HRD

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Fourteen HRD graduate students were pioneers in action learning at a Southeastern University during two quarters in 1996. Participants kept journals and wrote course-end essays identifying themes they found pertinent in their experience. In this analysis, follow-up telephone surveys and interviews were used to investigate the perceived durability of action learning and the current insights participants have about the personal and process themes they identified earlier.

When they have drawn to a close, action learning sets are rarely revisited, resulting in a gap in our understanding of "what really happened." The need for investigating set outcomes, particularly from the individual and long-term learning perspective, has been identified earlier (Dilworth & Willis, 1997). A clearer understanding of action learning may have potential for transforming teaching practice in adult education and training.

Although it is common procedure in qualitative research to conduct "member checks" after data collection, returning to information sources to verify the data they provided, the events and experiences of action learners are not necessarily recorded, and if recorded, are not necessarily rechecked and verified at a later date. This follow-up study reports such a revisitation and compares self-report data gathered immediately after their learning experience in 1996 to perceptions they now have, more than a year after the learning set activity.

The study brings together for the first time salient action learning start-up data for this university and submits it to participant review. However, some of the striking initial findings from the participant essays have been referenced earlier (Dilworth & Willis, 1997; Willis, 1998). The study at this university has helped to inform a larger undertaking: the analysis of action learning set activity and outcomes in a recent international, hands-on study program at the Revans Centre for Action Learning and Research, University of Salford, UK.

Investigative Strategies

The researchers used multiple methods. Data from the original essays were reviewed for comparison with new data from interviews. (Member checks of the earlier data had been conducted several months ago.) For telephone and face-to-face surveys, respondents were provided "priming" questions similar but not identical to those used to guide the production of course-end essays a year earlier. In both cases, these were open-ended inquiries, asking at course end what was experienced during the progress of the action learning sets, and in the current study asking what influence the experience has had over a year's passage of time since class participation. Choices in framing and wording followed the patterns of questioning Brookfield recommends for participant evaluation of adult education. Recall of specific events was not the purpose of this follow-up inquiry. It was perceived to be more useful to pose questions that would help respondents "return to the scene" in a more general way, looking for those persistent learnings and "aha" moments when something changed for them that has outlasted the moment itself.

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The questions were constructed in collaboration with a colleague who conducts action learning classes in another university, and double-checked with doctoral students who were part of the original GSU classes but who have had additional formal action learning experiences during the intervening year. The purpose was to arrive at the strongest possible content validity before the questions were asked of the original action learners. Three of the original class members were excluded from the study because of their on-going formal study of action learning since the course. Their responses, if included, would have been influenced by the subsequent learning, and the researchers were clear about wanting to know what was retained, used, and valued as a result of the first experience only.

A graduate student who had not been involved in action learning in any way was selected to conduct the interviews. They were completed either on campus or off-site, by phone or face-to-face, at the convenience of the respondents. All are busy, working professionals whose schedules needed to be accommodated. The respondents were encouraged to record and/or orally report whatever came to mind about the original action learning experience, whether or not the theme or issue they raised had appeared in the earlier data. They were not confined to answering the questions in the interview protocol. The interviews were meant to present a new opportunity for reflection, and the degree of ease or difficulty which respondents might have in doing this was also expected to speak to the degree of persistence of the habit of reflection they were asked to develop during the coursework.

Electronic recording was not used, but the interviewer was asked to record what was said verbatim, in so far as possible. Respondents were aware that this was happening. They had already authorized use of the original essays for research purposes, and they willingly extended this permission to the new data generated. Six sets of interview data were obtained. Counting the exclusion of the three advanced action learners, nine out of 14 of the original essayists are accounted for. Four students, carrying over into the second class, repeated the essay assignment in the second quarter, yielding a total of 18 essays to be analyzed and coded. These second essays were generally a little more reflective, but were not sufficiently different to warrant a separate classification. Five essayists unaccounted for were on extended seasonal holidays, moved out-of-town, or otherwise unavailable in the given time frame. No person contacted was reluctant to give an interview.

Secondary Investigation: A Case Study. After completing the class, one student had carried her learning directly and immediately into application in her own organization, and had enlisted several others from the original class membership to help her work with an action learning set she convened. Her goal was to enable persons she supervised to prepare for large scale administrative changes in a private educational institution which was opening a satellite campus. She did not undertake additional formal learning about this kind of inquiry, nor did she make use of what might be called "experienced" action learning consultants, instead proceeding entirely on the basis of what knowledge and understanding had been gained in the original class. For this reason, she is included in the one-year-later group that had no additional formal training to use the techniques of action learning. The success of her pioneering efforts permits research follow-up that has an unusual amount of closure, and the story of how she applied what she learned seemed to merit special study.

This case-within-a-case section is co-authored by two HRD graduate students who never studied action learning. One of these had action learning thrust upon her as one of eight active set members at the private college, and so hers is an insider view of "one who went through it." Her research colleague is a volunteer who has considerable interest but no formal training in action learning or opportunity to participate in it. Together they interviewed set participants as well as the administrative supervisor, reflecting with them on the process and outcomes of the action learning response to crisis that the supervisor had introduced in her organization. They asked the supervisor the following questions specifically: 1) What did you hope to gain from [initiating] the action learning experience? 2) What differences did you notice in the participants while conducting your research [the trial set]? 3) What problems occurred and how did you handle them? 4) What constraints and organizational realities did the learning process reveal? and 5) Has your perception of action learning changed?

Themes Identified in Initial Coding of Essays

The 18 essays used for identifying the themes and patterns that emerged for students engaged in action learning in the university classroom were submitted by 14 graduate students, mixed at doctoral and masters levels (repeat essay assignment noted above). Because this was a start-up effort and not every student had a client organization to work with initially, some of the burden for providing experience with action learning was carried by an in-class project. It involved an intractable problem connected with making an HRD Center operational. Finally all members of the class had clients, except for one whose schedule could not be worked out. At the end of the Winter quarter, several students asked for an extended opportunity to work with these clients, and a second class was established for Spring quarter. Along with carry-over of four students from the first class, another four enrolled for the first time (class sizes: 10 and 8). These two groups are treated as one for research purposes, on the basis that much of their experience was common and that no large amount of new cognitive material was added in the second class.

Six of the themes emerged from the grouped data, managed with NUD-IST software, directly from the thought priming questions that guided the essay writing. Students were asked when they were most engaged, distanced, affirmed or uncertain, when they felt they did their best action learning work, etc. Other major themes emerged during the process of coding text units. There appeared to be 17 of these originally, but they later settled by frequency into a list of 16 with only one theme further subdivided. The themes, or domains of data, and their operational definitions are presented below:

Engaged - When I felt the most engaged, interested, involved, "meshed" in a positive way
Distanced - When I felt the most distanced or separated from others or from the subject under discussion
Affirmed - When I felt good about self, about others, and about the action learning set as a whole
Uncertain - When I was uncertain, confused, puzzled, self-doubting or reserving judgment
Best work - What I felt was my best work in action learning
Transformation - I was changed fundamentally, essentially in my thinking
Current insight - An "aha." Looking within myself, describes my current understanding
Learning gaps - (main theme with subcategories) What I initially saw (or now see) as missing from my knowledge of the subject, of self, or of people interactions
Learning gaps: interpersonal or intrapersonal - When I felt I didn't understand what was going on in the group or within myself
Learning gaps: cognitive - What I don't understand on an intellectual or subject matter level
Learning gaps: before event - What I wish I had known before I started the class
Learning gaps: after event - What I find I still need to know more about
Observation of others - Visual or insightful observations about others, about the set, or about the set mentor
Future reflection - Issues to be considered/thought about in the future
Credibility - When I worried about the issue of being credible to the client or to other set members while at the same time acknowledging ignorance of the problem and its solution
Enabling role - Ways that I helped the action learning process (e.g., modeling good questioning, encouraging set members or problem owners to help themselves or each other)
Key terms, metaphors - Images/ideas/phrases that stimulated, inspired, or illuminated my thinking, imagination, and/or confidence during the action learning process
Future action - What needs to be done as a result of action learning (i.e., to understand it better, do it better, facilitate it better, or otherwise accomplish related personal or professional growth).
Intensity - Extreme depth of energy or feeling; strenuous effort to do something

regarding others, self, or set (may be internally or externally evidenced)
Assumption/opinion - A categorical statement of belief as if it were fact (pontificating)

Each of the themes was spread, in direct quotations, on a matrix that indicated whether the nature of the comments were process-oriented, more concerned with organization issues, or more in the personal vein. Again, coders worked independently but reached a final consensus about this further sorting of the data. Two of the three coders had no connection to the course and thus were not biased by having been present for any of the events. The third was a graduate research assistant who had attended the first sessions and had helped to find and specify client problems for class members. For all three coders, this was a new kind of research, showing them ways to look at qualitative data that they had never attempted before.

What the Themes Imply for Adult Learning

Although students initially felt discomfited because they were not provided with specified, measurable behavioral outcomes in their course syllabus and wondered in their essays whether they could ever "get their arms around" the course content, their essays document a shift within two to three weeks of participating in the new kind of learning endeavor. They marked this movement with expressions that valued their new "freedom to learn"
and the encouragement to depend on their own resources to find out what they needed to know. There were readings and handouts and eventually texts imported from the UK, but as one student indicated, "It is hypocritical to study action learning without doing it." Other statements that appeared on the "learning gap-cognitive" matrix reflect a continuing puzzlement that kept the students curious, motivated, and occasionally frustrated. Intellectually, they wanted a clear definition of action learning; experientially, they were challenged and excited that they were going to have to find out for themselves what action learning meant to them and could mean to their organization. Illustrative comments can be helpful here:

> Action learning seems to be an open, honest communication between groups of people who have problems to solve, but I am not sure action learning is an entity at all --still puzzled after five books and pounds of articles.
>
> I am in formative stages and wondering about prescribed processes for action learning.
>
> I want personal accounts of experiences with action learning.
>
> I seek to match action learning with what I know so far...I am wondering about evidence that learning occurred as the set problem was solved.
>
> I am encouraged to investigate action learning further because I don't know what learning gaps are remaining or how to fill them.

The point these students are making as adult learners is that not having information all codified and outlined and not knowing exactly where their reading and processing is taking them is highly motivating. This turns on its head the notion that adults want to learn only what can be immediately translated into job skills. It also turns on it head the notion that HRD should primarily concern itself with training for improved performance. These are first implications of our observations from the data, and will need further treatment as set research goes forward.

Where the energy of the students seemed most to reside was in the personal growth side of learning. While an exhaustive accounting of these themes would be too lengthy for this article, it is clear from the data that students are most engaged in their learning when they are learning something about themselves *in relation to* working out problems and relationships. These are matters they know least about, and find most universally applicable as adults. They are most distanced when someone in the group is "pontificating," or acting the expert role as if there were no other knowledge to be had in the room except that of the pontificator. Assuming the naive learner stance does not seem natural in our society of adults, and yet, that is exactly what these students valued highly. Strikingly, it is precisely this genuine naivete, this recognition that we are not "know-it-alls" that made discussion safe and open, so that even the shyest knew they were contributors and were rewarded for it. The paradox of this discovery against the backdrop of ever-increasing demand and dollars paid for "expertise" in organizations should be lost on no one in HRD, and goes far toward explaining the misuse and underutilization of the power in human resources organizations already have but mainly do not understand.

Since the original data analysis is referenced here primarily for comparison with newly collected data, only one other theme needs special mention. This is the theme of transformation. We have thought of this as a "change in the character or condition of a previous point of view," and have considered it a more satisfactory indicator of adult learning than is the traditional behaviorist definition of learning as "a change in behavior." It has been debated and is still debatable the extent to which world views and mental models influence what we do and think and feel, and how these influence our productivity, in turn. If the data from these fledgling action learning sets is borne out by subsequent research on action learning process and outcomes, then transformation is what adult individuals long for --but have grown not to expect -- in their learning. Transformations do not have to be earth-shattering, although the essayists do indicate that new realizations have been opened to them that were not accessible before. Two avenues of transformation were noted: concerning the personal, and concerning process. Few are willing to dare hope that their organizations are, or will be, transformative.

A major change for several participants was the development of comfort with the idea that "it is OK not to know." Paradoxically, this made one person "more confident than I have ever been." Another remarked that believing that one "knows" anything definitively "can even be dangerous/highly overrated." Another added, "It is a relief knowing that I don't have to be an expert...I may call on my intuition, common sense, and creative thinking...[This] makes it easier to deal with others in a group situation...now I do not feel intimidated." Again, "it built awareness for me, awareness of myself, awareness of the way I now think of myself and group dynamics."

Other illuminating comments about the transformative process show not only the deeply personal nature of action learning, but also the almost immediate applications that participants can see themselves making in their daily lives:

> I'm glad action learning has come into my life.
>
> Action learning permeates my waking and sleeping hours. I am different now because of the time spent discussing and experiencing action learning.
>
> To begin learning the skill of reflection was essential for me.
>
> [There were] several 'aha' moments for me ...not the ones that were shared and dissected [but] where something struck me in the middle of something else...did not occur during any formal sessions [but rather] at odd moments when I was supposed to be doing something else ...fascinating to experience these moments...realize just how much is going on subconsciously. [We] must deal more with human beings as whole people, rather than as inefficient machines.
>
> > When you question and explore, you are able to drop many of the value judgments that you normally place on individuals
> >
> > Incredible experience. Action learning is going to bring a new dimension to me both personally and professionally.
> >
> > I began to work through the sensitive issues and balance my self-criticism.
> >
> > It has not been just another learning theory added to my knowledge. I view it more as a life philosophy that I could use in all areas of my life --helped me realize it is OK just to question and reflect.

It is important not to lose sight of the fact that these are expressions from graduate students who have heavy investment in acquiring knowledge, and who work hard to develop their expertise. It is also important to note that personal transformations do not stand in the way of impressive bottom line results. They may even facilitate these. One student reports that his client organization is anticipating saving over a million dollars annually for the corporation as a result of his action learning set work with them. (Report forthcoming.)

Interview Data, One Year Later

Those original class members who have not had further connection to action learning are still finding it "hard to explain what it is." One respondent suggests that this is because "Other forms focus on specific learning tasks --regurgitation paradigms. It [action learning] is the exact opposite of memorization and regurgitation." A selection of other memorable comments shows that participants still place a high value on the experience and provides at least broad verification of transformational themes:

> [At first I thought it was] a typical consulting experience It was not until later after I got started in my own [client] set that I realized the contrast. I had always been the consultant "expert" and in action learning I was in an environment where I was not the expert. I began to realize how unimportant expertise is relative to new problems. I would like to be involved in more action learning projects...[I] have always been known as an "out of the box" guy. Action learning has given me some validation.
>
> Action learning...is the only learning method capable of producing quantum leaps. It is like doing a literature search on a topic and then adding your own little bit of additional information [traditional learning] vs. the discovery of germs. Action learning is the vehicle for helping us realize things we can't see.
>
> Action learning is a filter through which you see things. It permeates a lot of things you look at...There is a universality about it; it crosses cultural boundaries. Very useful! The higher up you go in life, the more of your day is spent problem solving. It is applicable to any problem solving situation, both personal and professional. Do we both have the same idea of the problem? What is standing in the way of solving it?
>
> The biggest impact is that I see it in everything I do --[It is] a great theoretical basis for a PhD program.
>
> Professionally, you are expected to be an expert, and [in my organization] I am trying to introduce the idea that non experts are better at coming up with solutions. Personally I have always tried to find a quick fix. Now I look at the framework and what is the definition of a solution and how to go about getting it.
>
> I have used action learning techniques with my wife. Personally I am more open to ideas and future solutions that previously I would not have considered. I have also done more journaling, and am asking questions in my journal that I don't feel obligated to answer.
>
> How I look at things and what I look at are different in action learning. And what you aim to gain is different. It offers an openness to allow a number of different possibilities to happen. Going in not knowing what you will learn is different than set objectives that we usually have in a training environment.
>
> I have been unable to use action learning in any practical application at work [but] professionally I am always looking for a place to use it. I have come close in my National Guard work but they, too, are caught up in putting out fires and getting the next thing done. [There is] no time to flush out issues, no critical mass that understands... The problem is everyone is looking for a quick answer... I think you could seed it through the

> organization to create a critical mass. I am disappointed in my organization's approach to a learning organization. People don't want to look at things a different way.
>
> It provides the opportunity to look at things in a fresh light --not easy to do. We have our own schema. Action learning takes you out of that paradigm. It forces you out and gives you a fresh way.

An interesting side comment from the interviewer highlights the fact that action learning can be having transformative effects that even the action learners discount or are unaware of. A respondent who was most despairing of introducing action learning in his organization had begun to use action learning principles in dialogue with his wife (the second male student who reported this). He quotes himself as saying, "Let's stop and see if we can ask a fresh question." The interviewer notes that he does find this helps to get to the issue, and find fresh questions that can keep the interaction more dynamic. The interviewer's behavioral observation was that the respondent seemed "surprised and pleased he had done this."

These comments are all from original set members who -- although they retain their belief in the power of action learning to help people and organizations learn, change, and grow -- would not describe themselves at this time as "doing" action learning in their organizations. So, while personal themes and effects of the class experience are verified as carrying over into their personal lives, they are not seeing great gains in the work place. The story of the fifth respondent is different, and her comments are reserved for inclusion in the case study that describes how she left the class and "just went out and did it" at considerable risk to herself professionally. She did so under conditions of organization crisis and feeling the weight of responsibility to tackle unknowns in the problem situation.

Case Study: Leading Administrative Change

In August, soon after class had been completed, the novice leader of action learning at the private academic institution began with a presentation to the management committee and the president. The issue was an on-going problem with enrollment processing, involving the work of three departments. It was agreed that the president would be the client; the sponsors would be the management committee who would designate individuals from their respective areas that they felt would take ownership of the problem and who would benefit most from "fixing" the problem. A one-hour initial meeting was set for September, with monthly meetings thereafter. The formal project actually lasted only eight weeks, and at the end of that time, the group knew it could "show evidence of organizational change as the result of action learning." The authors who revisited this intervention and reported the results in case study form have written the synopsis that follows.

Action learning describes a developmental approach used in a group setting to assist organizations with accomplishing objectives. We discovered that action learning is not intended to fully resolve organizational problems. Rather, the *experience* is designed to confront learners with the constraints of organizational realities, often leading to the discovery of alternative and creative means of accomplishing objectives. The set members [8 in all, from the registrar's office, student services, and academics] were presented with the challenge of creating greater efficiency in the new student enrollment process.

The areas to be examined for efficiency were proof of graduation, transcript evaluation, application processing, file maintenance, and resume student processing. Once developed, the new enrollment procedures would be used to manage the rise in student enrollment that would occur with the opening of the new satellite campus. Eventually it was hoped that the satellite campus would use this process for managing new student enrollment.

From the outset, the learning set convener felt she had a basic understanding and limited experience with regard to action learning. As time progressed, she began to see action learning as more of an experience than a definition. During the first meeting, the facilitator noticed that some of the participants seemed distant and uninvolved in the learning process. By the third meeting, however, things changed. Participants became more comfortable with one another and displayed an eagerness to express ideas. Group members also began to examine the enrollment process stage by stage. Around the same time, the "ah-ha" factor (that moment of clarity when both the problem and the potential solutions become evident to all) became a very important part of the process when examining the responsibilities of each department in the enrollment process. Questions were raised that forced everyone to rethink the responsibilities of each department...and led to a shifting of responsibilities and work load. As weeks passed, the action learning process paved the way for change.

As the process continued, the potential roadblocks became evident. The management staff did not always support the process, which affected group member attendance. Management did not allow employees to utilize their ideas. New problems arose out of the transferring of responsibilities. The administrative staff was reluctant to change. The absence of some group members detracted from the questioning and may have limited the overall learning process. If the facilitator had it to do over again, more time would be spent initially in securing full management buy-in. In retrospect also, the make-up of the action learning set could have been more diverse.

What was accomplished was nevertheless no small achievement. Action learning never stopped at this college even after the group ended their meetings. Short term changes included these steps: 1) Processing of student applications and administration of files was combined in one streamlined area. 2) New positions were created. 3) Transcript evaluation was shifted to another department for greater efficiency. Changes that were oriented toward meeting long-term objectives were: 1) The newly established enrollment procedures set standard for the satellite campus. 2) Positions, as well as employee qualifications, were upgraded. 3) Cross-training became a part of every employee's accountabilities at the satellite campus.

This was intended and carried out as a limited intervention, confined to one area of college operations. It is perceived as an example of what action learning can do in a very short period of time when there is even a grass-roots commitment to it. The mental boundaries the set struggled with in the beginning were overcome through the establishment of trust and open discussion. Those once timid, were now eager to seek advice of co-workers. The bonds of friendship and respect that were forged though this process were seen as yet another benefit.

Conclusions

"Time and time again, we were reminded of the fact that action learning is an ongoing, ever changing process," report the case study examiners. As all three authors have discussed the retrospective look that this multi-sided follow-up study has provided, we find ourselves in agreement that reflecting on what happened, or did not happen, and how we interpret those events, are also highly significant adult learning processes. What seems especially instructive about the case study is its illustration of the fact that action learning is immediately applicable, doesn't take a guru to initiate, and is highly satisfying because of high engagement, high learning, and the high potential pay-offs that are associated with its high risks.

There are more telling comments from the masters student who took her courage and her belief in action learning into her own workplace, after five brief but intensive weeks in an adult action learning class. She is thoroughly convinced that "Action learning opens up doors and allows tacit knowledge to spring forth from people. Fresh questions bring out ideas not exposed before... Professionally, it has brought education into the loop of problem solving. The focus is on learning, not just resolving. I have integrated it into my teams. It is an evolutionary process of growth and development. I am using it on an an-going basis." She has also stated that "there may be no such thing as an 'expert' in action learning," because every group is different and "you can only understand and learn the process by doing it." However, she feels that "feedback from knowledgeable individuals who have experienced the process is mandatory." The knowledgeable individuals, it should be noted, were other members of the same class she used as a springboard for her bold organizational intervention.

The lessons for adult educators and HRD professionals in this verification study are simple: Adults take great joy and pride in taking charge of their own learning, once they are freed and expected to do so and are provided with some insights and techniques for undertaking this. The less they are led down a structured path to "knowledge," the more they feel they are fully capable and voluntarily engaged in the learning enterprise. What they have been intellectually, psychologically, and socially engaged in learning tends to "stick" and be called into use. The value of an externally conducted "gap analysis" to identify their own learning shortcomings becomes questionable, when the evidence of what they do not know and cannot do is accessible to them much more personally and immediately in the fully participatory and highly charged environment of action learning.

Even when we are confronted with overwhelming evidence that these things are true, as those of us who work with action learning are repeatedly confronted, there are not a lot of easy answers as to how we can best integrate the inquiry-plus-action process highly structured, linearly and hierarchically designed academic environments. It is refreshing to see, however, that some brave "non-experts" just roll up their sleeves and go out and do it.

References

Dilworth, R.L. & Willis, V.J. (1997). Analysis of action learning experiences through use of critical incident reporting. *Proceedings of the Academy of Human Resource Development*. Atlanta, GA, March.

Willis, V.J. (1998). Action learning: Design features and outcomes at Georgia State University. *Performance Improvement Quarterly*. Washington D.C.: International Society for Performance Improvement.
In press.

Commitment of Action Learners in an Unfamiliar Setting to Clients, Other Set Members, and the AL Process Itself

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Five internationally and otherwise diverse action learning sets worked with manager-clients of the South Manchester University Hospitals NHS Trust in the UK, to help resolve serious dilemmas posed by merger, reorganization of services, and facility closing. Set members were largely unknown to each other and unfamiliar with hospital work and cultures. They addressed the clients' needs continuously over a period of two weeks. Grouped data generated from text units of 23 essays written by set members demonstrate that they did not lose sight of their responsibility to the client even when the challenges of their own group process and personal learning were most intense.

Proponents of the use of small group processes for organization learning, problem-solving, and decision-making have choices to make about what data to collect to demonstrate direct connections with positive organizational change. Commonly, skeptical clients will express concerns like these: 1) Conceding that learning interpersonal skills is valuable to employees, can we be assured that real tasks are accomplished in the midst of all this concentration on processing? Isn't there a tendency to put personal issues ahead of the client's needs and the desired organizational outcomes? 2) How much involvement ought management to have in the process work? 3) Is the time spent justified by superior results? 4) When do participants stop talking and get on with whatever it is that they are talking about doing?

For those considering action learning initiatives, there are other natural concerns: Is this "new idea" worth a try in our organization? What does anyone really learn that cannot be learned more efficiently by other means? Will this help us develop a learning organization? Particularly in the case of action learning, scholars need to look for process data that will help to answer these questions, for in such data there are real success stories that may tend to be obscured by more customary end-point measures. Even the preliminary findings presented and interpreted here suggest that solid evidence of the value of action learning can be provided to prospective clients, once an action learning process data base of sufficient depth and variety has been established and explicated. We find that in the Salford case we are studying, action learning does not dilute organization learning or work, but instead enhances both.

Using the Data from the NHS Trust Project

Most action learning sets do tend to have difficulty maintaining a deliberate balance between accomplishment of tasks and investment in personal learning, for they are always in the midst of confronting real problems in real time. The problem nexus and the uncertainties it holds loom very large in everyone's mind. Simultaneously, however, they are in the midst of learning how to solve problems in the future without always having to return to ground zero in their understanding and their personal and group momentum. The gaining of new insights--*about how to gain new insights continuously* --is central to this effort. The difficulty of striking an authentic balance is legendary among participants who use the Revans action learning model, and the action learners in the hospital trust project, working out of the Revans Centre for Action Learning and Research at the University of Salford in the UK, were no exception.

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Those unfamiliar with the model will want to know a few specifics. Revans states explicitly that, for new learning to occur at anywhere near the rate of organizational and world change, learning from dialogue with one another will need to be seriously attended to. Learning can then be defined as a function of continuously combining what is already known from our collective accumulation of formal, programmed knowledge (P) with the posing of assumption-testing, insight-generating questions (Q). Revans has used L= P + Q as shorthand for this combination/recombination of elements that leads to learning. What happens when people get together in action learning sets to learn and problem-solve lacks the predictability many social scientists value , but on the other hand, there do appear to be patterns common to the sets as they evolve. It is one such pattern that this study seeks to illuminate.

The Honey-Mumford Learning Style Questionnaire used to identify preferred styles of the set members also was used to place them in sets that would have all styles represented. The likelihood that a set would turn out to be composed entirely of activists, or would be all reflectors, all pragmatists, or all theorists was therefore nil. While it was predictable that some set members on the basis of learning styles would be uncomfortable if a task orientation did not predominate and others would be uncomfortable if it did, that is not specifically what we wanted to know about at this particular point in our research. As we coded data from the essays 23 participants wrote at the end of the experience about how they perceived the action learning process, we found a category of statements that repeated over and over, theme and variations. What these highlighted was that participants felt a deep sense of responsibility for what they were doing.

We wanted to know how that pattern played out when NUD-IST software generated group data. To what or to whom did the set members feel most responsible, and what did they do about it? They were all many hundreds of miles from home and they were not accountable for working as paid consultants. Why, in a totally unfamiliar setting, working with clients and set members they had never seen before and might never see again, was their commitment so strong? It seemed important to find out, and perhaps to add another set of insights to the building of theory about action learning processes and outcomes.

The investigative approach is case study, calling upon mixed methods (Stake, 1994; Willis, 1998) for illumination of the phenomena of action learning as perceived and reflected upon by those who were engaged in the process. The recording of critical incidents is vital. Since the data is all derived from personal essays about the lived experience, the data also represent a kind of "life writing" by individuals (Smith, 1994) -- an autobiographical perspective on events in which they were involved that took them out of familiar contexts (as they say, out of their "comfort zone") during an intensive two-week period in their lives. Many describe those two weeks as unlike any they have previously experienced. Our own observations and involvement "on call" as set mentors during the same time frame provide the only data beyond the essays. No formal follow-up interviewing has been done. As in all textual analysis, the analytical task is to trace the material evidence in the personal documents and to identify how it fits within "a hermeneutical whole." (Hodder, 1994).

Types of Commitment

Three persons involved in the coding process found independently but unanimously that set members expressed strong feelings of responsibility 1) to the client, 2) to other members of their set, 3) to preservation of the integrity of the action learning process as they understood it, and occasionally 4) to the back-home professions with which they identified and hoped to share information upon their return (e.g., HRD, adult education, management). Data was sorted into each of the four sub-headings as well as collected in the major domain called "responsibility." These constitute the reports on which findings and interpretations are based. Constant comparison helped to find patterns within the data that may have theoretical significance.

There were several advance clues related to the personal and group commitment factors. Over the course of the two week summer program when the project was underway, high anxiety was expressed over the final presentations that were to be made to the hospital managers. Many set members were thoroughly convinced that there was insufficient time to produce anything of value for their clients. Still, they would have to try. Thus, there was an overriding sense of responsibility keyed to the knowledge that somehow, each set would have to "get the job done." What "the job" was seemed far from clear. Some overtly expressed the need to be told how to do it, or at least to be told what the final product should look like -- a condition inconsistent with real, at-risk problem solving. As set mentors, we thought we saw task performance anxiety and personal fear of failure in this, as well as a preference for structure and linear procedures. But we were also beginning to see something else: a growing sense of participant identification with the clients and their dilemmas. Tension stretched between the struggle to meet the clients' needs and the struggle in learners' respective sets to figure out what to do with each other and their feelings toward each other as they worked long hours together. Then there was the added stress of doing everything that had to be done in a two-week time frame. For some, there was perhaps an added feeling that if they did not perform well, they would be letting their assigned and/or roving mentors down, not "measuring up" to what we hoped for them.

This learning experience was never intended to be a simulation -- or "just another class project" -- and if any participants had thought it would be, they were quickly disabused of the notion. Thus, the first explanation we had for the rapid commitment to task achievement was the participants' headlong encounter with real problems that needed to be solved. That is, of course, a distinguishing feature of action learning and its motivation impact was anticipated. It did not fully prepare us for the depth of commitment to persons and to action learning itself that we later found expressed in the data. This leads us to speculate that task commitment and commitment to the client are not quite the same thing. While the first may be characteristic of early phases of action learning (engendered by the participants' ethical and achievement motives to perform) , if commitment does not shift from task toward the person who will use task outcomes (the client; the problem owner), action learning may not reach its best potential. High task orientation may even stand in the way of discovering that the problem as originally stated is not the root problem that concerns the client, or it may stand in the way of client understanding and acceptance of new information or willingness to act upon it.

Expressions of commitment to the client or to other set members could be expected to vary in kind and intensity from person to person, and they did. We decided to look at the gender influence, if any, to see whether the commitment-to-client responses in particular were of the "caring" or nurturing type, and whether such expressions came equally as often from women and men. While similar questions arose concerning the nature and extent of commitment set members expressed toward each other, space prevents reporting those results of the more extended investigation here.

Finally, we were intrigued by what appeared to be a high level of involvement in making the action learning process work the way Reg Revans, who was a roving set mentor, envisioned it. There were many notations in the essays of ways in which action learning is distinct from other kinds of group experiences the participants know about or have personally experienced. For the most part, the distinguishing features of action learning were pulled from and referenced to the experience itself rather than from an academic understanding of the process.

The following discussion is confined largely to reporting and interpreting the patterns and meanings associated with commitment to clients. Commitment to other set members, to the process of action learning, and to the home professions are referenced only as necessary to provide context for understanding the development of client commitment. Each of the four dimensions of what we have come to call the action learning " responsibility series" is a story in itself, with much more to be told in subsequent analyses.

Stages of Commitment

Action learners were able very early in the set work to identify with the knotty, palpable dilemmas faced by the clients. This appears to be a distinct, "grappling with the issues" phase-- ripe for misuse of an activist style, "inquisitional" attempts to fact-find, and paternalistic "take over" of the burdens of the client. It was not a comforting time for set members, who could not initially see their way past the paradox of "having" a problem and knowing next to nothing about it. Frustrated , one participant suspected at first that the client system was unwilling to share pertinent information and could even be engaged in "problem cover-up." This is one potent illustration of the low tolerance task-driven individuals have for low-clarity/high ambiguity assignments, and illustrates one of the highest hurdles the action learning process must clear if it is to be successful. Set members were confronted with the realization that they simply did not know enough to start with the customary trouble-shooting techniques, a realization that may even be an indicator that true action learning has begun (Dilworth, 1997).

Shortly thereafter, empathy for the client-as-person began to emerge. Set members more readily accepted their own knowledge gaps, became better listeners, and essays signaled a distinct shift in the nature of the client and set relationship. Clients were suddenly observed to be knowledgeable, courageous, and truly dedicated to their work, albeit faced with enormous and unprecedented challenges. At this stage, set members still tended to see the problem solution in terms of their own personal and set performance responsibility.

During a third stage (and with varying degrees of success), set members loosened their unintentional control over problem definition and solution, understanding finally that these were prerogatives of the clients. When set members gave up being " the problem owners," they reported finding themselves remarkably free to provide a qualitatively and quantitatively different kind of help. One essayist described the change in this way:

> We slid into the ownership trap on several occasions. It's a seemingly natural progression that once a problem has been identified, it must be "fixed." We had to remind ourselves that we did not have ownership of the problem. Stating this was liberating to the group, because it enabled us to return to exploring the disconnects and questions surrounding them. [Two set members] helped to remind us that even if the answers were good to us, they might not be to the ones concerned. It needed to be their answers.

Suggestions could not profitably be posed as solutions, and questions could not be asked in a style that implied that the questioner already had "the answer." Even during the final presentations made to the client-managers, one participant worried that what was being presented could too easily be construed as accusatory, faulting managers for what they had not yet done, and potentially raising defensiveness and resistance to undertaking new strategies. As the sets evolved, members were increasingly sensitized to the effects their thoughts and actions could have on others, and reflection -before-the-act became a necessity. Even those most wedded to the belief that using their personal expertise was critical to the set enterprise began to soften their insistence that their points of view should carry the day. Potential effects on clients seemed to be uppermost in everyone's mind.

At the same time, individual task performance anxiety was never completely overcome. In one set, which undertook 22 interviews of non-clinical personnel, a researcher expertise was offered as a way of overcoming the fear of ending the two-week stay without a "product" to offer the client. In other sets, a conscious effort was made to serve as non-expert "sounding boards" and parapersonal extensions for enabling and encouraging the client manager to share his/her own reasoning, reflecting, and exploration of things that might be done. As the case has ultimately unfolded, both kinds of approaches seem to have served the clients well.

Illustrations and Findings

The question of whether gender differences in commitment to client could be shown is easily settled. No such differences have appeared in the data; even in the second stage of commitment when "feminine" relationship empathy might have surfaced. It may be that participants selected the action learning experience partly because they were already predisposed toward caring, accomplishing change, and service providing in organizations. Not all were human resources professionals, however.

Broad Indicators of Commitment. Evidence of commitment to the client ranged all the way from copious note-taking during early hospital administration and manager-provided orientation sessions to end-of-project expressions of the desire to stay in touch. The first is indicative, once again, of the powerful urge to do the best job possible on the basis of as complete information as might be acquired. The latter shows the movement toward commitment to the client as person and colleague. A capsule illustration is the comment: "By the end of the program, I found [client's name] to be very warm and friendly. I truly wish that we could continue our support of her. I do plan to write to her and send her a copy of our group photo." Interpersonal warmth and a general sense of accomplishment was reciprocal. There is little doubt that this was a turning point experience for hospital personnel also, for the use of action learning sets has been expanded to other hospitals within the NHS. The interaction with people from outside their own organization and frame of reference left Manchester hospital managers with " some wonderful tools to use to make the [change] process move smoother," as one reported to the set assigned to work her problem. "We had grown very close as a set," and were then able to offer a number of suggestions without giving advice, a member of that set agrees. In this particular set the client-manager had been successfully encouraged to become a trusted and participating member, present for some of the crucial set deliberations, fully apprised of set progress throughout the duration of the project, and even participating in the final presentation of set findings to hospital management. The value of manager participation in set work was not lost on the hospital administration; in retrospect they believed they should have made the client-managers' time available for set participation throughout the entire project instead of leaving the time commitment negotiable set by set.

Disoriented at first by the totality of their unfamiliarity with the setting, set members came later to appreciate ways in which the client organization made extraordinary commitments of it own to accommodate the set activity. One significant piece of this was up-close exposure to the critical work of the hospitals, complete with tours of the surgeries while heart and thoracic operations were in progress, intensive care, and outpatient clinics. Another sign of trust and commitment was the approval for and scheduling of the 22 interviews of hospital staff personnel. Such on-site involvement --far more personally experienced than any encounters in hospital meeting rooms --went a long way toward engaging the action learners in the real problems with which they were to wrestle. It was this access to the hospital that enabled one action learning set to discover that "the assigned problem was not the true area that needed attention." While this is a characteristic discovery in problem-finding phases of any investigation, in action learning the need for a change in focus is revealed in the process of group inquiry and not by an importation of outsider expertise. As one essayist described this effect, "Managers and consultants are used to dealing in black and white, but action learning requires imagery in gray. There is reality behind unfamiliar places and unfamiliar problems." "Asking and answering fresh questions induces people to challenge assumptions," another added, although challenging assumptions can also pose considerable threat to an organization which thinks it knows what problems it has. Perceptions of and admiration for the courage with which managers were facing their problems changed dramatically, effacing earlier cynicism about how serious the two NHS facilities were about making change.

Specific Expressions of Commitment to Client. The nature of these specific expressions has already been indicated in discussion of the three stages of commitment. The growth of the commitment is best illustrated in the set members' own words, however. The intensity of confusion in the first stage is represented by the following comments, gleaned from across the 23 member essays:

> We feared that the client representatives would come to the final presentation expecting six sets, six problems, and six solutions.
>
> One the third day the sets got together for the first time. We took a look at all the information that the hospitals had thrust upon us. We began to ask ourselves several questions...such as, why did they give us all this paperwork? What did they think we could do with all this information within a two-week limit? Did they expect us to respond as experts? We reminded ourselves that we were not there to solve the problem of the merger, but to lay the ground work for the managers to continue working together long after we returned home. We decided to invite [our client] to an informal meeting to address our questions... We asked her the previous questions and added, what is it she

> would like to get out of our learning experience? We needed to know if we were to work on the stated problem... We were pleased to find out all she wanted from us was to be a sounding board for her and she didn't want another expert report. She wanted to bounce her ideas off of us and see if she had the right idea about the action learning process... It saved us a lot of time because we didn't have to guess what she wanted from us...She had to have her business plan ready before the first of the year.
>
> We had many ideas about how we thought the outcome should be...We made guesses and assumptions and then decided to call in an expert on the subject. We asked [a British set mentor] to allow us to question him about the norms for women managers in his society...We took what he stated and when we met with [our client] again we got her feelings about where she stood on this issue. This gave us a clearer view of our limitations in reaching a desired outcome.
>
> Our first time out with our client was not productive or very cohesive. We regrouped after that fiasco and went through a self-assessment.
>
> All the members asked: What are we supposed to do? Is the expectation to solve our assigned problem? And is the problem truly the stated problem?
>
> We had a brief meeting with our client to discuss the scope of the problem. We then had subsequent meetings with her and her staff to talk about their experiences and feelings in regard to the privatization. (This led to more extensive, one-on-one interviewing.) Our third day was in chaos...Some wanted to emphasize the process of action learning while some wanted a list of questions to give to our client on the day of our presentation.
>
> The problem focus as it was presented to us was laden with systemic disconnects. We decided to break it down to foundational, relational segments, and asked questions relating to those disconnects. What a long winding road to this rather basic discovery! We were fraught with analyzing the details presented to us.

While some of the foregoing statements foreshadow a change toward the second stage of commitment, as set members began to empathize with their clients and respect the fact that they were facing challenges of major proportions, the next series of quotations exemplify this second phase more readily. They show the shifting of the concern of the set from "What shall we do and how shall we begin?" toward understanding the need for confidentiality and trying to see the problem arena from the client's perspective.

> The set perceived that the client contact was wary of our role. Initially, she directly answered our questions but never elaborated; nor did she volunteer any information. We knew that building trust was a major concern and that she had reason to be cautious with her information.
> Over time, she became somewhat more at ease and after providing her with a trial run of our final presentation, she seemed relieved and relaxed. Our intentions were to protect her at all costs. We told her this repeatedly but it took proof to convince her.
>
> There was a concern that we could be placing [our client] in job jeopardy and considerable effort was expended in ensuring the presentation was factual and data-based. Additionally, [the client] was the only Trust person provided a written copy of the presentation material.
>
> The most common obstacle to reflection was the urge to get on task --to solve the client's problem. The closer we got to the end of the two weeks, the more of an effort it was to engage in reflection. Simultaneously, of course, was the increased concern about what we were to supposed to present to the client on the last day.

> Despite our commitment to following action learning guidelines, our set and others feared that the client would be expecting something of benefit to show for our time involvement. It was the realization that the Revans learning cycle was never completed and therefore we could not deliver a truly beneficial nugget, that seemed to redirect the group from trying to develop a "package" for the final presentation. Instead, we focused on a presentation of our experience with the action learning process with the idea of introducing the Trust hospitals to the process and challenging them to continue what we had begun at Salford.
>
> What was profound was the enormous amount of inquiry and insight that this process of sharing gave to the manager, his assistant, and the set members. By the end of the morning, the manager and his assistant were seeing the problem quite differently. Even more profound was the fact that the manager and his assistant came up with their own solutions.
>
> [Our set] succeeded in developing a presentation which permitted the hospital managers to view their problems from different perspectives. It asked a vital question for their managers to consider at all times, which was: "What is not negotiable, and why ?"

The last quotations shade over into the third stage, in which set members relinquished their ownership of the problem to the client whose responsibility it becomes to address it in forward action. While the action learning cycle requires that something be done with findings of the inquiry, the burden for action is always on the problem owner and others who care about and can do something about the problem. When the unfamiliar/unfamiliar quadrant of Revans' matrix for set formation is utilized, the implementation action devolves upon those who work in the organization under study. The visitors certainly became engaged in and concerned for helping to find problem solutions and wanted to do more. Despite their time limitations there was widespread satisfaction with what they had accomplished. There was also widespread conviction that the client-managers considered themselves much farther along in their thinking, after the two weeks of inquiry. When one client was asked to comment on the value of action learning at the end of one set meeting, he said, "I find the process of having to explain things to ignorant and interested people very stimulating. It makes you articulate the problem and explore it more deeply. We make so many assumptions, and we're far too busy to do this at work.."

Commitment as an Overall Theme in Action Learning

A highly significant contribution the participants felt they made was to model the action learning process with sufficient integrity so as to present it in a favorable light to the client organization. "One thing which became increasingly evident at Salford was that not only did the process develop, we developed as users of the process. The client also developed at least the exposure to a new problem solving method and at most the foundation and impetus for implementing action learning in its own environment," asserted one set member.

Several spoke of the inequalities of expertise among set members, and the personal credibility they felt was at stake when some exercised their expertise in dominant ways. It is instructive to note that the one set member in the entire group who probably came closest to being a hospital expert, a CEO of a hospital from Australia, did not pose solutions but did explain socialized medicine when asked. Commenting on this, a set member saw this behavior as evidence of the outsider-CEO's commitment to the Manchester hospital clients, who would not be well served by any ready-made solutions. It was also viewed as a delicately balanced commitment to other set members and to the within-set process of action learning.

Even from the small sampling of statements provided , it should be obvious that without making commitments to fellow set members and to the integrity of the action learning process, less than optimal results would be achieved in action learning. It may be particularly crucial in the unfamiliar/unfamiliar type, where pre-conceptions about problems and setting --and in this case, participants -- would seem particularly hazardous. . In every instance, the accomplishing of the work for the client was played against the backdrop of interpersonal dynamics in the sets, as members learned about each other, how they thought, and what values they operated from. In at least one instance, commitment to the client took temporal precedence over the resolution of strong feelings generated in exchanges between two set members. This caused a delay in interpersonal processing that violated the norms the group had established for itself to be open, honest, and immediate in confronting such issues. The norm was voluntarily suppressed by the persons involved so that work could be completed on the final presentation in time for client review. The incident can surely be viewed as both a commitment to client and to the process of action learning, for decisions were made openly and with input of the adversaries.

Another excerpt from an essay strikes a appropriate note for concluding this discussion: "The Salford experience and the work with the South Manchester Trust Hospitals made it very evident that organizational growth and learning could result from continued action leaning activities." This seems a perfect expression of the hope for change that grows when there is a comprehensive commitment to the simple-- and workable-- ideals of action learning.

The conclusions we draw are entirely based on the reflections of those who wrote at considerable length about what they pursued, what they accomplished, and how they felt about it. New insights about how to use action learning as an organization, group, and individual development strategy are certainly of interest to others working in the action technology mode of HRD practice, as well as to those who have instructional responsibilities and who seek to employ action technologies in HRD teaching. The interface action learners have with clients (the "problem owners") is a crucial element of the action learning framework . It may be particularly important to understand how client outcomes and participant learning may be impacted by action learners who are "naive" and not familiar with the organizational setting or the clients with whom they work.

References

Dilworth, R.L. (1997). *Action learning as a gateway to learning organizations.* Presentation at the 20th Session of the National Executive Institute, FBI Academy, Quantico, VA, June 25.

Hodder, I. (1994). The interpretation of documents and material culture. In N.K. Denzin & Y.S Lincoln (Eds.), *Handbook of qualitative research.* Thousand Oaks, CA: Sage.

Smith, L.M. (1994). Biographical method. In N.K. Denzin & Y.S. Lincoln (Eds.), *Handbook of qualitative research.* Thousand Oaks, CA: Sage.

Stake, R.E. (1994). Case studies. In N.K. Denzin & Y.S. Lincoln (Eds.), *Handbook of qualitative research.* Thousand Oaks, CA: Sage.

Willis, V.J. (1998). Case study and its virtuoso possibilities. *Proceedings of the Academy of Human Resource Development*, Annual conference, Chicago, IL, March 4-8.

Cognitive Frame Phases In An Action Reflection Learning™ Program

ARL™INQUIRY[1]

Much has been written about group or team phase development, but little exists about how an individual's perspectives must change as the individual becomes a team member and as the group or team progresses through the various phases of development. This paper proposes a model of this individual perspective development as observed in several action learning programs.

Much attention has been given to group or team phase development, such as Tuckman's (1965) "Forming-Storming-Norming-Performing" model. For practitioners, attention has also been focused on group leadership and facilitation techniques Schein, 1988; Schwarz, 1994). Research on individual responses to group expectations has focused on ways in which individuals are overpowered by the group, as, for example, Janis's (1972) discussion of group think, and Milgram's (1974) classical research on compliance. Little attention has been given, however, to the transformation of perspective, and its relationship to learning, that needs to occur as someone goes from being an individual in a nominal team to being a team member in a fully functioning team. We need to know more about the transformations that occur as team members work and learn together, the progression of these transformations, and behaviors characteristic and indicative of them. This paper adopts an over-all theoretical assumption that purposeful individual behavior arises from, and conforms to, an actor's cognitive frame. That is, behavior is dependent upon one's definition of the situation, and the role(s) one adopts to construct behavior in that situation.

This paper asks the question, "How do participants in an action learning program alter their conceptual framework to become team members of a fully functioning team, engaged in both task and learning?"

One view of team learning which has found evidence of progression through various stages describes four modes of team learning- Fragmented, Pooled, Synergistic, and Continuous (Kasl, Marsick, & Dechant, 1997).

> "In the Fragmented mode, individuals learn separately, but the group does not learn as a holistic system. ...In the Pooled mode, individuals begin to share information and perspectives in the interest of group efficiency and effectiveness. ...In the Synergistic mode, members create knowledge mutually. ...Our concept of the Continuous mode describes a team in which synergistic learning becomes habitual (pp. 230,231).

While this model of team learning phase progression describes transitions from individualistic to continuous learning, it focuses on what teams do, and not how team members frame things differently as they become a functioning team. Observations of teams in action learning programs suggest that learning is a necessary part of team formation and maturation, and that such learning involves a phase progression of cognitive frames for the individuals involved.

Methodology

This study derives from four Action Reflection Learning ™ (ARL™)[2] programs including: (1) a major food manufacturing organization; (2) an automotive manufacturing organization; (3) a

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[1] ARL™ INQUIRY is a research group affiliated with Leadership in International Management Ltd. Contributors to this paper are: Glenn Nilson, Lyle Yorks, Judy O'Neil, Sharon Lamm.

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major utilities organization; and, (4) current research being conducted in a financial institution. Research conducted at the major food and financial companies have included a field observation component conducted by ARL™ Inquiry, a research consortium studying action learning, organizational learning, and the learning organization. This paper also draws data collected on an ongoing action learning program in a large utility company. This program is shorter in duration than the programs which have included an ARL™ Inquiry researcher—there is an orientation day followed by three 2-day sessions over a 6 week period. Data from the program is being collected through evaluations methods including debriefing of the learning coaches and critical incident interviews with participants who have completed the program. The automotive manufacturing study drew data from questionnaires and interviews conducted as part of a doctoral dissertation.

Findings: What Cognitive Phases Have Been Observed?

Phase One - Self-Focused Individualism As ARL™ programs begin, it has been observed that participants enter the situation with expectations and cognitive frames derived from previous experiences and their interpretations of the events to happen based on those experiences. However, ARL™ programs do not generally fit with participants'entering frames, so there is a tension between their attempts to impose existing frames onto the situation encountered, and the inadequacy of those frames to serve as bases for behavior.

As participants enter the program, they do so as individual business leaders with interests focused on their businesses and their own careers. Being on a team is likely to be seen as similar to being an individual in competition with other individuals.

Within their teams, members often compete with each other to define how their team will operate, attempt to take charge, impose familiar structures, and engage in familiar roles. Participants may exhibit this by attempting to take charge of the meeting, or by suggesting a structure for the team to begin its operations. Since action learning contains real project work as a core element of a program, participants often quickly turn to attempts at task work, even task solution, as they are still encountering initial stages of group formation. Not surprisingly, they generally approach their tasks with the same frames as they engaged their teams- as competing individuals attempting to solve problems by using familiar perspectives.

Organization	Behavioral Examples
Major Food Organization	Two ranking members of a group in effect competed for leadership—one with the pen and the other standing at the other end of the room as they talked. One of the two said during a stop/reflect, "I am uncomfortable…you are leading, but not marshalling us in a direction," prompting another member of the group to say, "I think he's doing what you want to do!"
Automotive Manufacturing Organization	"I would say when I first showed up (to the program), my whole approach to it was to try to gain some kind of political advantage. People know that you're here, they know that you're in something that is considered elite…get good marks so that any feedback that comes back will be positive. You just use it as a political steppingstone to enhance your own career and your upward mobility."
Major Utilities Organization	Members of one team represented had worked together before. Their first day's interaction was heavily disrupted by interruptions, sniping and competition for air time. As they worked together over the two days they discovered that they could work together more smoothly and with much less interpersonal conflict by

	establishing and maintaining a set of ground rules for conducting the team's business and for interaction within the team. By the end of the two days, they had substantially reduced the tendency to interrupt, they responded to statements others were making and they appeared to be working well together.
Financial Institution	"In the beginning I was quite skeptical In the past there have been numerous courses. None resulted in any change" "I'm trying to evaluate against my old world and the project ahead..." "We should just treat the problem as our business, and from that determine the things that are needed to set that business up."

Phase Two – Team Focused Individualism At this second cognitive phase, participants attempt to work within the team to achieve the goals of the project. They are still seeing things from familiar perspectives based on previous experience and their own businesses. They are likely to attempt to manage the team with a sense of having needed expertise, but are not yet aware of the expertise within the team and among the team members. The team is seen as a number of individuals who can divide the work that needs to be done, but the team is treated as an extension of themselves operating alone to accomplish the project. The team is not viewed as a unique social entity with its own potential and limitations. Difficulties working together at this point will probably be viewed as unresolved issues of who is going to run the group, who is able to support the individual's own efforts and who is going to be an impediment, and who is a competitor. Individuals are competing with *their* solutions to the problem as *they* define it.

Organization	Behavioral Examples
Major Food Organization	During a stop/reflect the following dialogue took place in reference to one member simply asserting control of the group during a meeting with the sponsor: 1st speaker: Your process was good in getting us started. We got some direction , but don't make it a pattern. 2nd speaker: Use brainstorming to give us equal time. 3rd speaker: I agree with brainstorming. 4th speaker: We must make choices in how we work.
Automotive Manufacturing Organization	"After the first week, it wasn't anything to survive anymore, it was something to gain from and to learn from and to experience. Then you saw it as a gift you were given, not to use for a cheap return, but to actually use it to enrich your own style, your own way of doing business" "You just started pulling together to get something done. It's kind of like an atheletic event or something. If you suddenly get into a relay race, the closer you are to running with a baton,

	the more focused you are on the job at hand and not so many peripheral things that you might be imagining on the side."
Major Utilities Organization	A team had both management and bargaining unit employees. Management and union have a historically adversarial relationship. As a consequence of three stop and reflect sessions during some difficult times during the group process, there was a growing cognizance of how the inherent adversarial relationship between these two groups interferes with their problem solving abilities. Reflection from one member of management is as follows: "We did three stop and reflects during the meeting. We were able to go over what we accomplished. Really making an effort on listening skills and being open to new ideas. Still have some split between management and union. Feel if one side says something, the other side needs to say something in their defense." Reflection from one union member is as follows: "Hard work, different opinions. People are still defending their territory. Still a concrete barrier."
Financial Institution	"There's a question about how we're going to work as a team, a split camp…we're just going to have to see who gives in." "(I) have a compelling sense of responsibility to share with my team…to be a leader." "I'm finding I'm uncomfortable. I like to be out front and in-charge."

Phase Three - Team Focused Team Membership In this phase of cognitive framing individuals begin to question the ways in which they have been attempting to work in their teams and with which they have been approaching their project tasks. Rather than competing to solve the team task as individuals managing the cooperation and work of others, they begin to pool ideas and insights into a social collaboration which is the property of the team, and not the manifestation of dominating individuals. They also begin to attend to the issues that impede their ability to interact effectively as a team. In this phase, participants are more likely to listen to feedback on how they are, or are not, impacting others, and they are more likely to be receptive to observations of other team members as to whether they are behaving in accordance with agreed upon team norms. Team members are more likely to tell others that they are not satisfied with a situation, or that they feel another team member's behavior is helpful or harmful to themselves or to the team's progress and ability to work together. They are taking the team and its interaction process much more seriously, and are likely to be highly committed to working well as a member of the team, rather than viewing themselves as individuals with separate agendas and interests.

Organization	Behavioral Examples
Major Food Manufacturing Organization	1st person: We had a misunderstanding yesterday, but were comfortable we could handle it…there was enough trust to understand why things are being said. 2nd person: I think we need a little R&D on our performance the last few days at the beginning

	of the next project day.
Automotive Manufacturing Organization	"Then at the end of the week, because of the closeness, you basically spent 24 hours a day with these people and you had a team mission you were given, and you had some team successes and failures that you shared, now you all of a sudden feel that you're part of something. That's not just an extension of what you usually do, it's something that's a thing of its own. It has a life and value of its own, and then you start maximizing what you're putting in and taking out of that thing…It tends to make you *abandon self.*" "The most valuable lesson that I have learned in my team experience is that not everybody is geared and wired the same way I am…You have to take time to recognize the other people, not so much in terms of their job or their experience or what they seem to know about the topic, but the way they are as people and what their values are and how you communicate to them.
Major Utilities Organization	Participants establish personal learning goals that they work on during the program—both in their action learning teams and back at the job. When one participant set a goal, he talked about being uncomfortable in praising and reinforcing his people for the work that they did. His expectation was that if he praised them for their work, the result would be that they would think that they must do enough if the work is worthy of praise and would "slack off" and do less…In between action learning meetings, the participant committed to take advantage of a visit from an executive to his group as an opportunity to provide positive feedback…In reporting back, he had not done what he said he would do, that his personal learning goal was important, but not "tattooed on his head". One of his team mates reflected that "praise will achieve higher results". During the final reflection of the day, the participant said that the idea that praise may encourage greater performance was a completely new way of looking at the idea for him and at the final session said that was one of his greatest learnings.
Financial Organization	"I think about the first week, yeah, you could have faked it. And I think we all, I don't know, faked it to some extent, but by the third one, you start to know each other, you start to get more comfortable. People start giving you honest feedback."

Oscillations Between Cognitive Frame Levels: a learning dynamic

The progression between cognitive frame phases does not occur in a smooth linear fashion. Instead, behaviors oscillate between the three phase typifications, with cognitive level emphasis occurring in the order suggested. This oscillating behavior is felt to be necessary to the learning that is taking place. If we accept learning to be a purposeful interpretation of experience and integration of interpreted experiences into a cognitive framework for making sense out of, and acting in, the world around us, then we need a model of team learning that is more complex that a linear skill-transfer process. Observations in the studies included in this paper show that team members are likely to oscillate between various sets of norms, experiential bases, and tentative behavior attempts, some held previously and others being of recent exposure. The oscillations amount to testing and establishing the fit of new data with existing frames for defining the situation and organizing behavior. This testing, like interpersonal conflict, explores and establishes applications and boundaries for situational definitions and behaviors.

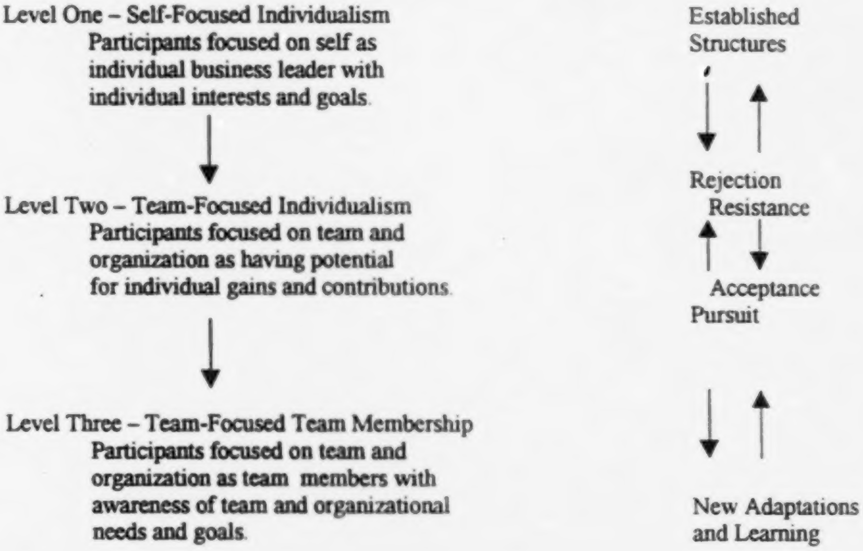
Organization	Behavioral Examples
Major Food Manufacturing Organization	1st person: We are in a struggle. Making false assumptions. I've communicated my needs and it just plops. I feel a lot of pressure that I am the one holding up the group. 2nd person: We are not making a lot of progress. Not addressing each others' needs…I feel a tension in myself that we will have a million things to do. "We had an up and down week, but we reformed well in Dijon. We got ahead of ourselves, had conflict and had to go back and reform…last night was good giving some more feedback." (referring to having dinner together and discussing their process very seriously.)
Automotive Manufacturing Organization	"Learning how to work with different types of individuals (on the project team) was extremely beneficial, so don't try to deal with the group as your team, try to deal with each person on that team in a way that brings out the best in them. …(T)his is still America. It's still a very competitive, individualistic environment. And, at the end of the day, it's still the way people are going to be measured and rewarded. I for one am not willing to give up that or to put that at risk just because I think there is a better system if I'm not going to be around to reap the fruits."
Major Utilities Organization	"…(an issue came up) and normally I would have gone "toe-to-toe", but I listened closely to understand, and let him finish what he was saying. In the past, I would have been too anxious to get my voice heard to listen to another person's story. This time I backed up, slowed down and listened before I spoke. "
Financial Institution	Initially, a team member suggested that all four teams should make an opportunity to get together in order to share findings and help each other. In a later oscillation team members

	suggested a need to communicate with other teams in order to ensure that ..."*no one is saying anything that will raise problems elsewhere.*"

Analysis and Conclusions

Learning in an action learning program typically involves oscillation between conflicting cognitive frames used to interpret situations and construct behavior. These oscillations are not aberrations in an otherwise linear process, but rather the individual and social attempt to try out and establish fit between competing frames. Initially, team members act as individuals with a set of personal interests and concerns. In the second phase, they recognize a need to perform within the group, but they attempt to apply individual perceptions of how the group ought to be going about its business. In the third phase, participants begin to understand and give priority to the needs and goals of the group and to others as members of the group. They also see the group as representing a broad range of resources. This model is offered as a framework for future HRD research, theory and practice.

Cognitive Frame Phases as Learning Oscillations



Level One – Self-Focused Individualism
Participants focused on self as individual business leader with individual interests and goals.

Level Two – Team-Focused Individualism
Participants focused on team and organization as having potential for individual gains and contributions.

Level Three – Team-Focused Team Membership
Participants focused on team and organization as team members with awareness of team and organizational needs and goals.

References:

Janis, I.L. (1972). Victims of groupthink. Boston:Houghton-Mifflin.

Kasl, E., Marsick, V.J., & Dechant, K. (1997). Teams as learners: A research-based model of team learning. The Journal of Applied Behavioral Science, 33, 227-246.

Milgram, S. (1974). Obedience to authority. New York:Harper&Row.

Schein, E. (1988). Process consultation. Reading:Addison-Wesley.

Schwarz, R.M. (1994). The Skilled Facilitator. San Francisco:Josey-Bass.

Tuckman, B.W. (1965). Developmental sequences in small groups. Psychological Bulletin, 63, 384-399.

Organization Development in the United Kingdom Public Sector

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Very little has been published about the application of Organization Development in the United Kingdom public sector, or about the involvement of Human Resource Development teams. This article reports the results of a survey of HRD managers working in the UK central government. The findings highlight significant OD activity within the sector and an important level of involvement for internal HRD teams. Questions are raised about the factors influencing the nature of that HRD involvement.

A number of definitions of Human Resource Development (HRD) have placed Organization development (OD) firmly within the field. For example, Swanson, in a paper for the 1995 annual conference of the Academy of HRD, defined HRD as a "a process of developing and/or unleashing human expertise through organization development and personnel training and development for the purpose of improving performance" (Swanson, 1995, p. 1-2). Similarly, in her article for the American Society for Training and Development, McLagan (1989) made the same link when describing HRD as the "integrated use of training and development, organization development, and career development to improve individual, group, and organizational effectiveness" (McLagan, 1989, p. 53). From these definitions, one might expect to find OD work falling within the remit of HRD teams in organizations. To explore this expectation, this paper describes the results of a survey of HRD managers within the British public sector.

Background on OD in the public sector

There are few published accounts of the application of OD within the United Kingdom (UK) public sector: for example, only four such articles appeared during 1994-1996 in the British Journal of Management, Journal of Management Studies, Human Relations, Public Administration Review, Organization Development Journal, and Human Resource Development Quarterly. These four examined the underachievement of organizational change programs in the public sector (Brooks and Bate, 1994), the structural reorganization of British Rail (Pendleton, 1994), factors influencing the outcomes of changes in ownership of public organizations (Parker, 1995), and organizational transformation and top-down change in the National Health Service (Ashburner, Ferlie, & FitzGerald, 1996). None of these four published cases addressed the involvement of HRD teams.

More has been published about the application of OD within the public sector in the United States. For example, Golembiewski, Proehl, and Sink (1981) identified 270 recorded cases of OD application in the public sector over the period 1945 to 1980, and more recently Robertson and Seneviratne (1995) completed a meta-analysis of prior evaluations of 47 published studies into organizational interventions, including 16 from the public sector. These studies both signified the presence of OD in the public sector but without identifying the players involved.

The current literature therefore lacks a description of the application of OD in the UK public sector or of those involved in OD interventions.

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Research questions

Given the lack of published accounts of those involved in public sector OD, particularly in the UK, research was undertaken to determine:

- The involvement of HRD teams in the application of OD techniques in the UK public sector, the nature of that involvement, and the relationship between the role for HRD teams, the size of HRD teams, and the size of the government department or agency;
- Who else, other than HRD teams, apply OD techniques within the UK public sector, and the extent of their involvement;

Methodology

Discussions with the Cabinet Office, a central department with key over-seeing and co-ordinating government responsibilities, determined that HRD policy is chiefly delegated to individual departments and agencies. A questionnaire was therefore designed, with the help of HRD practitioners in four departments and agencies, to address the two research areas. The sampling frame was provided by the Cabinet Office (1997) document *Development and Training for Civil Servants: A Framework for Action*, which listed 73 central government departments and agencies at the time of the survey with at least 300 employees. Of these 73, a list of addresses could only be obtained for 64, and that list contained all but one of the 24 organizations with at least 3500 employees. The questionnaire was mailed out on October 1, 1997 to these 64 departments and agencies either addressed to a named Head of Human Resources or to an un-named Head of Training.

On the advice of the Cabinet Office, the questionnaire was kept deliberately short and easy to complete to encourage response, and therefore concentrated on only ten OD interventions selected to cover the individual, group, and organization levels. For each intervention, respondents were asked to check boxes corresponding to the frequency and nature of the involvement by the department's HRD team. The ten interventions, and their definitions supplied in the questionnaire were:

- *Team building* - helping members of a team to increase their cohesiveness and cooperation.
- *Process improvement* - seeking to make a work process more effective or efficient.
- *Culture transformation* - seeking planned changes to employees' assumptions about the "right" and "wrong" ways of doing things.
- *Strategic planning* - assisting work areas in establishing long-term organizational goals, objectives, and direction.
- *Structural change* - helping managers to alter the structure and responsibilities of component parts of their organization.
- *Training* - designing training which provides individuals with knowledge, skills, or attitudes which may be applied immediately on the job.
- *Counseling/coaching* - designing formal helping relationships in which individuals may relate their problems to sympathetic listeners or be advised how to deal with work or interpersonal problems.
- *Cross-functional training* - providing the knowledge needed by those in work teams to function with another unit or organization.
- *Future search conferences/large-scale technology* - bringing together at least 300 employees from all levels of the organization as part of a rapid change process.
- *Quality circles* - bringing together small groups to identify methods of improving production or to solve work problems.

These ten interventions were selected from a list in Rothwell, Sullivan, and McLean (1995), and definitions were taken from the same source but adapted to fit the UK public sector environment based on pilot study feedback from practitioners. Respondents were also asked to check boxes corresponding best to the extent of involvement in OD interventions within their department or agency by certain other groups such as external consultants and internal Human Resource Management teams.

Response rate

Of the 64 mailed questionnaires, 23 were returned (including one only partially completed) from organizations whose total workforce was nearly 220 thousand employees. The overall response rate was 36 per cent, and the response rates by organization size were:

Employing 300 - 999:	6 returned out of 20 (30 per cent)
Employing 1,000 - 2,999:	6 returned out of 19 (32 per cent)
Employing 3,000 - 9,999:	8 returned out of 17 (47 per cent)
Employing 10,000 or more:	3 returned out of 8 (38 per cent).

Summary of findings

Finding 1: HRD teams vary in size from fewer than 10 staff to more than 45, with a close relationship between the size of the HRD team and the size of the department or agency. Table 1 shows the size of HRD teams relative to the size of their departments or agencies. Generally, there was a close relationship, with the larger organizations having the largest HRD teams (half of the organizations employing at least 3000 employees had HRD teams with 45 or more staff). Conversely, the smaller departments and agencies had the smallest HRD teams, with just over half of the organizations employing fewer than 3000 having HRD teams with fewer than ten staff.

Table 1
Relationship between organization size and size of HRD team

(Numbers)

Size of department/agency	Size of HRD team			
(number of employees)	Less than 10	10 - 24	25 - 44	45 or more
300 - 999	5	1	0	0
1000 - 2999	1	3	0	1
3000 - 9999	1	3	2	3
10000 and over	0	0	0	3

Finding 2: A wide range of OD interventions occur in the UK public sector, with the most frequent being training, culture transformation, strategic planning, and process improvement. Table 2 shows the frequency with which the ten selected OD interventions were reported as occurring in the responding agencies and departments. Of the ten, only future search conferences were found to be occurring frequently or occasionally in a fewer than half of the organizations. Interventions based on training, team building, process improvement, culture transformation, strategic planning, and structural change were all reported as occurring at least occasionally in most departments. Those interventions occurring frequently were: training (in all of the organizations); culture transformation (in 68% of the organizations); and strategic planning and process improvement (in 59% for both). Quality circles and future search conferences were reported to be occurring the least frequently.

Table 2
Percentage of departments where selected OD interventions occur frequently or occasionally

Intervention type	Interventions occur frequently	Interventions occur at least occasionally
Team building	45	91
Process improvement	59	91
Culture transformation	68	91
Strategic planning	59	91
Structural change	50	86
Training	100	100
Counseling/coaching	41	82
Cross-functional training	36	68
Future search conference	5	27
Quality circles	14	55

Finding 3: HRD units are most likely to have a major role in training, counseling/coaching, and culture transformation, and least likely to have a major role in quality circles, future search conferences, team building, and structural change. Table 3 shows the percentage of departments where frequently-occurring interventions involved HRD as a major player. Training again came out as the main role for HRD with training interventions reported as occurring frequently in all departments and agencies, and HRD teams reported by 91% of organizations as having a major role in those interventions. The HRD role was still substantial, although slightly less important, for culture transformation, where 68% of organizations reported frequent interventions, and 67% of those organizations reported HRD as having a major role. The HRD role was much less for team building and structural change interventions: both were reported as occurring frequently around half of the departments and agencies, with only 10% of those organizations reporting a major role for HRD in team building and 18% in structural change interventions.

Table 3
Percentage of departments where frequently-occurring interventions involved HRD as the major player

Intervention type	Primary/major role for HRD
Team building	10
Process improvement	54
Culture transformation	67
Strategic planning	38
Structural change	18
Training	91
Counseling/coaching	67
Cross-functional training	38
Future search conference	0
Quality circles	0

Finding 4: There is little relationship between the size of HRD teams and the variety of OD work they undertake. An analysis of the survey results showed little difference between the nature of major OD involvement of small, medium, and large HRD teams: for example, all were similarly involved in training and culture transformation interventions. The only notable difference was the lack of frequent major involvement by any of the medium-sized HRD teams in strategic planning and process improvement, where-as around a third of small and large HRD teams were frequent major players in strategic planning interventions and around half in process improvement interventions.

Finding 5: HRD teams are one of a large number of groups applying OD techniques in the UK public sector. Table 4 shows the involvement of groups other than HRD in the ten selected OD interventions. External consultants, for example, were reported as being used for OD interventions by 91% of departments and agencies on either an occasional or frequent basis. Internal groups were also being used, including internal trainers and OD specialists based outside of HRD teams, Human Resource Management, and specialist strategic planning units. An analysis of these groups against organizational size showed no relationship: i.e. the smaller organizations were just as likely as the larger ones to be using external consultants and to have internal trainers outside of HRD.

Table 4
Percentage of departments where groups other than HRD units are involved in OD interventions

Group	Involved frequently	Involved occasionally
Departmental trainers based outside HRD/Training unit	22	39
Departmental OD teams based outside HRD/ Training unit	22	43
Human Resource Management, or similar	35	26
Strategic planning units, or similar	9	39
Efficiency units, or similar	13	26
Quality divisions, or similar	13	9
External consultants	26	65

Discussion of findings

The survey results showed OD interventions in the UK public sector to be far more common and varied than the scarcity of published accounts would otherwise suggest. Interventions appear to be common at the individual level (through training and counseling/ coaching), team level (through team building and process consultation), and organizational level (through culture transformation, strategic planning, and structural change). The survey results also highlighted the importance of the OD role played by internal HRD teams. Although such teams can vary in size from less than 10 to more than 45 staff, most are involved in a wide variety of OD interventions. This suggests that the size of the larger HRD teams does not necessarily reflect a wider range of OD activity compared with their smaller counterparts, but could simply reflect more frequent application of the same interventions.

The survey results raised interesting questions about why HRD teams are more active in certain types of OD interventions. The name given to some internal HRD teams, *Training and Development*, suggests a likely bias towards training interventions, and this is reflected in part by the survey results. The minority role for HRD teams in structural change and, to a lesser extent, strategic planning, suggests that some HRD teams may be less active in those interventions involving less up-front training. Any general move away from direct training in organizations would therefore threaten these teams.

The survey results also showed that, for interventions where internal HRD teams are not major players, a number of other groups take the lead, including external consultants, internal trainers and OD specialists based outside of HRD, Human Resource Management and specialist strategic planning units. The large number, and wide variety, of other OD providers raises the issue of where responsibility should lie for OD strategies and the co-ordination of OD activities. A broad view of the HRD field, as taken by Swanson (1995) and McLagan (1989), would suggest an important strategic role for HRD teams within OD, although such a step could run counter to traditional views of the role of the teams.

Research implications

If OD interventions are as common in the public sector as the results of this survey suggest, then it opens up several avenues for further research, such as exploring the success rate of interventions in that sector compared to the private sector, or how interventions common in the private sector have been adapted to suit public sector culture. It also suggests the need for a means of sharing OD practice between public sector practitioners. The nature of the involvement of internal HRD teams in OD interventions also raises further potential research questions on the factors that dictate their current role, how that role could be changed to provide a greater involvement across the wide range of OD interventions, how HRD teams could become more involved in OD strategy, and what the implications of a greater OD role would be on the structure and staffing of the teams.

Conclusions

This survey provided a first glimpse into the application of OD techniques in the UK public sector. It highlighted the significant level of OD application in the sector and the important role for HRD teams in many OD interventions, particularly those involving training, culture transformation, and counseling/coaching. Several other groups were also identified as active in OD interventions, including external consultants and internal trainers and OD units based outside of HRD teams. From analyzing the survey results, questions emerged about why HRD teams are more active in certain interventions than others and what effect the traditional training role of these teams has had on the nature of their current OD involvement. These questions lead on to discussions of how internal HRD teams could expand their OD role and their involvement in public sector OD strategy, and these discussions would benefit from being based on the results of further research.

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References

Ashburner, L., Ferlie, E., & FitzGerald, L. (1996). Organisational transformation and top-down change: The case of the NHS. British Journal of Management, 7, 1, 1-16.

Brooks, I., & Bate, P. (1994). The problems of effective change within the British civil service: A cultural perspective. British Journal of Management, 5, 177-190.

Cabinet Office. (1997). Development and Training for Civil Servants: A Framework for Action. London: Cabinet Office, Office of Public Service.

Golembiewski, R. T., Proehl, Jr., C. W., & Sink, D. (1981). Success of OD applications in the public sector: Toting up the score for a decade, more or less. Public Administration Review, 41, 679-682.

McLagan, P. A. (1989). Models for HRD practice. Training & Development Journal, 43 (9), 49-59.

Parker, D. (1995). Privatization and agency status: Identifying the critical factors for performance improvement. British Journal of Management, 6, 29-43.

Pendleton, A. (1994). Structural reorganization and labour management in public enterprise: A study of British Rail. Journal of Management Studies, 31 (1), 46-50.

Robertson, P. J., & Seneviratne, S. J. (1995). Outcomes of planned organizational change in the public sector: A meta-analytic comparison to the private sector. Public Administration Review, 55, 547-558.

Rothwell, W. J., Sullivan, R., & McLean, G. N. (Eds.) . (1995). Practicing organization development. San Diego, CA: Pfeiffer & Company.

Swanson, R. A. (1995). Human resource development: Performance is the key. Paper presented at Academy of HRD 1995 conference, Minneapolis, MN.

Human Resource Development in the UK: A Partial Exposition.

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'HRD' in the UK is presented as diverse and in a state of flux. This partial view is derived from examining the way in which 'HRD' in the UK has changed over the years, taken alongside changes in the national and organisational policy and culture, developments in theory, and shifts in personal expectations.

'Every few hundred years throughout Western history, a sharp transformation has occurred. In a matter of decades, society altogether rearranges itself - its worldview, its basic values, its social and political structures, its arts, its key institutions. Fifty years later a new world exists' (Drucker 1992).

This paper presents a 'partial' view of HRD in the UK. It is a view that I am naturally partial to, I am biased towards it, it serves my purposes, and so on. It is also a view that does not claim to be the whole truth, or even any part of the 'truth'. It is a partial account recited by one person. I am building on partiality by drawing upon thoughts put forward in Stead & Lee (1996), who compared development of HRD in Western and Central Europe. If we can persuade others to believe it, then we might start to create a 'truth' – together we might say 'this is what happened… this is why it happened… and this is what it means…'. If enough people become partial to a view then we write history and our view becomes the 'truth'. I suggest that our current view of HRD and our anticipation of its future profile is a function of our partiality.

In the UK, HRD is seen as a relatively young and predominantly Western concept which has emerged from management and development thinking, and has been shaped by values and events as Europe has transformed over the last 50 years. This view is based on the argument that as one era presents a need, ideas and solutions are created to meet that need, which create a new approach and perspective (Lessem 1986, Kinsman 1990, Pedlar et al. 1991). As the new approach develops, further needs come to light which call for a new perspective, leading to the creation of ideas and solutions in order to develop. It is interesting to note that according to Pedlar et al, this assumption about HRD is in itself a product of its era, mirroring current thinking that learning organisations must evolve, adapt and transform to develop and survive (Peters & Waterman 1982, Pedlar et al. 1991, Senge 1990, Argyris & Schon 1978). In the remainder of this paper I shall discuss HRD in the UK by examining its development and the trends within this.

The Post War Years. Following the Second World War each nation in Europe focused upon basic needs of securing shelter, safety, food and warmth, as Europe faced the challenge of restabilising and rebuilding social, economic and political structures. The defeat of fascism heralded a political trend to the left concerned with restabilisation and the rebuilding of national economies within a democratic framework, following a model of programmes of nationalisation and welfare systems. Although individual countries within Western Europe were primarily occupied with regaining their own stability, the consequences of war also called for strategic planning and policy making at a European level to safeguard economic stability, human rights and future protection of its citizens. To these ends the Charter of the United Nations, chiefly aimed at gaining access for participants in world markets, was drafted and the horrific revelations of the concentration camps led to the European Convention of Human Rights 1950 (Story 1993). The iron grip of Stalin's rule in the Soviet Union and in Eastern Europe led to increased tension which developed into the cold war encouraging Western Europe to close ranks, thus sowing the seeds of the European Community (Laqueur 1992).

Organisations had the same needs as the nations and their individuals. Industry had been geared completely towards the war effort and faced repairing wholescale destruction of major

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cities, bridges and transport routes. Organisational structures characterised by central control and lack of individual autonomy were adopted. This suited the systematic rationality of scientific management, and also gave credence to what MacGregor (1960) saw as the traditional understanding of human nature. Known as Theory X this concept maintains that the workforce wish to avoid responsibility and need to be firmly controlled and directed by management. In Western Europe this led to tight top down management structures with decision-making firmly in the hands of directors and chief executives. Efficiency was measured and monitored by time and motion studies, and payment by results systems were established in the belief that individuals are best motivated by financial reward (Huczynski & Buchanan 1991). Typical structures resembled Mintzberg's notion of the machine bureaucracy where the focus is a pull towards standardisation and control through formal rules and regulation from a central authority (Mintzberg 1983).

Management thinking at the time emphasised a systematic, ordered and planned approach to training and development as the way to rebuild, restabilise and remobilize the workforce. This approach is best characterised by the Weberian premise of control through authority (which reinforced national governments power base) and Taylor's scientific concept of management (which assumed economic reward as the best motivator) (Weber 1943, Taylor 1947). So immediately post-war, the picture in the UK is one of focused national strategy, tight organisational structures and hardworking individuals preoccupied with regaining stability. The nation was united at national, organisational and individual levels in regaining stability and social care; the focus was clearly on the management of human resources rather than development.

The 1950s to 1960s. The fifties saw little unemployment, better housing and healthcare, comprehensive welfare systems and increasing demand for labour. The death of Stalin in 1953 kindled hope in Western Europe that the Cold War might end. As it became clear that this was not so, attempts to establish a more united Europe brought a liaison between West Germany, France, Italy and Benelux in 1958, with de Gaulle refusing entry to Britain. By 1960 Western Europe was enjoying a time of economic prosperity, with the economic boom (Wirtschaftswunder), of West Germany and strong growth in Britain, Italy and France. However, the sixties heralded major changes and a questioning of political power structures.

By the late sixties there was major unrest throughout Western Europe. Britain underwent a series of economic crises and saw the onset of civil unrest in Northern Ireland. In 1968 French students were demonstrating in Paris which led to massive anti-government protest marches in Paris. Student demonstrations were held in West Germany, Italy and Spain and anti-nuclear protests in Britain. Increasing concern about Soviet power, the consequences of the Vietnam war and the movement of nuclear missiles engendered a mood of dissatisfaction which brought about an upsurge in new parties and movements concerned with peace and the environment, and a move away from the consumer society (Lane & Ersson 1987). Traditional perceptions of the world were challenged further by, amongst other things, watching the first steps of man on the moon, by the advancement of technology in the home and at work, by the coming together of a European community and the possibility of a borderless world (Ohmae 1992).

In Western Europe the rational and systematic development of human resources had worked well, and provided low unemployment, and skilled workforces who enjoyed the benefits of comprehensive welfare systems. The scientific concept of management expanded in organisations with the development and delineation of functions such as marketing, finance and operations research with a focus on systematic job analysis (Lee 1996). In Britain the implementation of the Industrial Training Act in 1964 led to systematic training of the workforce in job specific skills, with management ordering and planning this process within functional systems (Pedlar et al. 1991). This was reinforced by the rising number of professional bodies, each guarding their own, at times very small, patch. HR bodies included the Institute of Training and Development (ITD), and the Institute of Personnel Management (IPM). This approach appeared to be satisfactory at national level, but organisations and individuals were less happy (Laqueur 1992). Specific skill development led to highly trained workforces, and well-regulated professional bodies, but also led to a labour force of isolated individuals with little understanding or ability to transfer learning and to work cross-functionally (Argyris & Schon 1978). Using Herzberg, Mausner and Snyderman's

(1959) analysis, made at the time, the basic hygiene factors had been addressed nationally, and were being replaced by the need to achieve, and to gain recognition and personal advancement.

Organisations as well as individuals were turning their attention to ways in which they could move on from the process of settling and stabilising to further development and achievement. In his Theory Y, MacGregor argued that by satisfying the basic needs of employees through reward and incentives, management could no longer use these methods to exert control. He felt that the time had come for a new approach which would aim to satisfy the self actualising needs of the workforce, 'new theory, changed assumptions, more understanding of the nature of human behaviour in organisational settings' (MacGregor 1960). During this period, therefore, we can see an increasing distinction between a standardising National approach to HR; the development of fossilising organisational theory that placed HRD as a subset of HRM as an organisational function, the importance in power of professional bodies, and at the same time, an increasing focus on organisational growth and individual self-development.

The 1970s to mid 1980s. Between 1973 and 1976 Greece, Portugal and Spain had established democratic systems in place of authoritarian regimes. Oil prices increased and the growing pace of technology put severe strain on traditional heavy industry. Economic recession spread in the seventies and continued into the early eighties. There was continued social disorder with the rise of terrorism and unrest in West Germany, Italy, Spain and Northern Ireland. Along with the recession and energy crises came a recognition of the consequences of the consumer society and industrial age, typified by the green movement in West Germany and a backlash against NATO's decision to install intermediate nuclear missiles in Western Europe. The decision to co-ordinate West European foreign policy (D'Avignon report in 1970), brought renewed interest in the move towards European unity, and the fall of deGaulle brought Britain back into the frame.

Economic crisis and dissatisfaction at governments called for greater public autonomy at regional and local level. In Britain where the recession was particularly severe, the election of Thatcher in 1979 to Prime Minister heralded major changes with the onset of a programme of privatising nationalised industries, reduction in public expenditure and a move towards service rather than heavy industry. Leisure and tourism expanded throughout Western Europe, along with high levels of unemployment. The mid eighties brought greater economic stability. In 1986 the Single European Act brought fresh commitment to the European community, with the aim of establishing a borderless internal market with the free movement of goods, people, and services, and the establishment of a unified monetary system and social legislation by 1992.

Mintzberg (1973) suggested that management could not be bound by a set of scientific statements and programmes, and that the true nature of managerial work was fragmentary characterised by horizontal networking, organisational monitoring and broad decision making rather than pure functional control. The notion of excellent organisations seemed to fit the mood and to offer solutions at national, organisational and individual levels, in its exhortation of leaner, flatter organisations, and uncluttered lines of communication. Organisations were encouraged to clarify their value base with mission statements and adopt bottom up development strategies with a focus on customer needs and care. Peters & Waterman (1982), developed their concept of the excellent company exhorting organisations to recognise that "people - not money, machines or minds - as the natural resource may be the key to it all.". Handy (1976), offered new perspectives on understanding organisations, demanding that the advent of computer communication technology called for new integrated structures and questioned ownership in the context of organisations stating that "the fruits of success belong in a sense to all the interested parties."

The wide diversity of approach that characterises UK HRD started to become evident. At national and organisational levels, economic recession called for greater efficiency, increase profit and productivity while retaining a tight control on public spending. With the decline in manufacturing and heavy industry and a growth in service industry there was a need to pare down the workforce to economise, and provide multi-skilled workers, who could work across functions and fill a variety of roles. There was, therefore, a need to introduce strategies and provision which would meet the developing needs of organisations in the age of advancing technology. At the same time, in all but the large yet-to-be-privatised organisations, there was a move away from in-house training, towards the buying in of ready-skilled labour. Individuals became important stakeholders in their own development, and in finding their voice, demanded work that brought personal recognition and responsibility and, opportunities for achievement and self fulfilment. Management education boomed and companies wanted to be a part of this, with a surge in M.B.A. programmes, internal and external management development programmes and a proliferation of outdoor training activities. A more flexible view of organisational theory and the role of HRM (and thus HRD) was at the forefront of new thinking, and incorporated notions of self development (Pedlar et al 1978), creative and lateral thinking (de Bono, 1970), action learning (Revans 1980), organisational development (Handy 1976, Argyris & Schon 1978), and quality management (Peters & Waterman 1982).

The multiplicity of ideas of the seventies and eighties brought about enormous organisational confusion and a piecemeal approach to HRD in which each faction offered its own panacea to the 'ills' of whatever the chosen target group was. The 'market' was flooded and confused, with little or no integration between large-scale systems of HRD (still evident in the large organisations and public utilities), a plethora of providers (ranging from practitioner-alienating formal higher education qualification systems to unregulated purveyors of theoretically bankrupt 'experiences'), and individual 'solutions' such as the search for professional recognition, self development and action learning. The underlying survival values of national and organisational strategies encouraged a win-lose mentality which was totally at odds with the win-win values of self development. Both seemed at odds with the external environment, which demanded global vision, expanding networks and environmental awareness. This conflict of values coupled with the speeding pace of change led to a dizzying sense of shock and of not being able to keep up (Toffler 1970).

One constant within this confusion was the increasing realisation in the world of practice, that theoreticians might be right in their focus upon the link between developing people and organisational and national progress. This was reinforced by the vision of 'an educated, trained and flexible labour force' as described in the government white paper 'A New Training Initiative' (MSC 1981). This document spelled out measures to skill up the workforce and was targeted at widening opportunities for young people and for adults, as 'The nature of the technological changes now being implemented throughout the world, the emergence of the newly industrialised countries, the redistribution of manufacturing capacity world-wide all mean that we have entered a period of rapid and far-reaching transition.' It suggested a national system of vocational education and training aiming to span across all professions with the introduction of agreed national standards of competence. By the end of this period the process of consultation, about what for many was seen as a major re-writing of HR in the UK, had started, and the development of human resources had become a recognised need by the end of this period, the focus remained isolated within different groupings and mainly aligned to the British Thatcherite years of 'each man for himself' (it was a time of sexism).

The mid 1980s to mid 1990s. Deregulation policies in the main industrial countries and the opening of European borders as a result of the Single European Act (SEA 1986) stimulated the economies of Western Europe and from the mid to late eighties it enjoyed a period of economic growth. Although the profitable days of traditional industry such as textiles, iron and steel were still in decline, the service sector continued to bloom. Unemployment remained high and seemed to have become a permanent feature of West European life. Progress in the eighties towards a unified European community was slow and troubled by setbacks. The crumbling of the East bloc in 1989-90 and the increased chances of a unified Germany grasped Western Europe's attention, and help in enabling the new Central Eastern Europe to make the transition to a new way of life became top priority. The collapse of the Soviet Empire coincided with economic depression throughout the West. The increased pressure of pumping economic and knowledge aid into Eastern Europe lent greater importance to European unity in terms of trade and security. With the end of the Cold War and demilitarisation of the Soviet Union the economic, military, political and social map of Europe had shifted with Germany becoming Europe's largest and most powerful member state virtually overnight. The eruption of disorder in Yugoslavia brought further pressure. In 1992, the Maastricht Treaty was drawn up with the main aims of maintaining European unity, internal markets and common foreign and security policy and achieving monetary union within a

European system of Central Banks by 1997-9. The forming of the Maastricht Treaty outlined a new Europe and the implications of the changes caused political stirrings and national concerns of lost identity leading to modifications which recognised individual nation's rights and ways of life. The dismantling of the communist Eastern bloc, the increased dissolution of geographical boundaries, the information and technology boom, the industrial recession, the advent of green consciousness, led to a re-examination of world view and move towards of integration.

Writers such as Handy (1994), Morgan (1986) and Senge (1990) voiced the need for individual and organisational adaptability and flexibility, and in the mid to late eighties two major strands of thinking emerged - Total Quality Management and Organisational Transformation. Japan provided inspiration for Total Quality Management where efficiency, quality and individual achievement combined to provide high profit. In his work 'Thriving on Chaos' (1987), Peters suggested that those who were striving for excellence were companies who sought constant improvement in the face of constant change. Deming argued that quality is to do with co-operation not competition and that management's role was to generate the climate for this (Pickard 1992).

The concept of TQM acknowledged the need for strategic process rather than quick fixes by aiming to respond to the challenges and changes of the external environment through creating systems which would be both profit and needs driven. The dual approach of creating fit lean structures and systems to maximise profit with the establishment of a continuous learning environment was believed to lead to a win-win formula benefiting national, organisational and individual needs levels. The need to develop, adapt and grow with change rather than react to it also gave birth to the idea of organisational transformation and growing interest in the Learning Company concept. Owen's definition of transformation as the shift from one stage of existence to another which is entirely different, is particularly in keeping with the era (Owen 1987). Senge added to the idea of organisational transformation by urging a shift from thinking of the world as the creation of 'separate, unrelated forces', to a view of the world as an integrated whole with its web of interconnections (Senge 1990). Pedlar et al (1991) integrated the concept of transformation into their vision of the Learning Company as a strategy for sustainable development. They view members of the learning company to include employees and employers, shareholders and customers, suppliers and even competitors, the environment and the community, and suggest that 'learning' is not confined to formal situations but is a continual lifetime process.

The 'visionary' nature of these notions, and the apparent practical advantages of TQM and its clones, meant that discussion and practice of HRD in the UK was starting to accommodate the role played by HR in reinforcing organisational and national strategy. The gradual (and stormy) establishment of the system of National Vocational Qualifications (NVQ's) was a prime example of the link between HR systems and strategy. This slowly started to operate in the early 1990s, following intensive discussion among the stakeholders (academics, providers, corporations, professions and individuals) about the nature of, and competencies (against which candidates could be measured) in their area of expertise. Similarly intense discussion was also occurring about the implications these moves had for education, the country, individuals, and the areas of study and practice themselves. During this time the ITD and IPM merged to form the Institute of Personnel Development (IPD). This merger was a good illustration of the 'desire for integration' prevalent across the UK. It also reflected the increasing unease that theoreticians and practitioners had with the difficult-to-sustain historical dichotomy between HRD and HRM. Further, the problems encountered in trying to manage the different entrance criteria, membership levels, educational aspirations and professional expectations provided a graphic illustration of similar problems being encountered nationally with the establishment of NVQ's.

In theory the mandate to provide 'lifetime' training and development opportunities associated with the NVQ system fits neatly with the idea of transformation. It recognises the organisational concerns of unrealised potential and the need for a strategy encompassing continuous learning through schemes such as Investors in People, and it also acknowledges the need of the individual to achieve and that 'the conscious development of people and organisations have a part to play.' (Lessem 1986). In practice, the introduction of national standards arrived at by a process of functional analysis raised concern that this approach had more in common with the systematic development exhorted by the principles of scientific management in the 1950s rather than humanist principles of integration (Burgoyne 1989, 1990), and that diverse national needs and flexibility might be sacrificed to standardised procedures (Porter & McKibben 1988).

At the same time as the government was forcing adoption of a national system of NVQ's through preferential financial packages and extensive promotion a raft of interested parties formed sub-groups. One example of an interested-party sub-group is that of the University Forum for HRD. The University's involved in the Forum already used two different (and apparently mutually exclusive) systems of assessment, and the 'competency movement' incorporated a third. The initial focus of the forum was therefore to (attempt to) integrate the qualification systems. This task, however, necessarily involved searching for a shared understanding of the theory and practice of HRD. The complexity (and impossibility?) of this, led to the permanent establishment and research focus of the Forum. The system of NVQ's is intended to cover all sectors and activities, and many other sub-groups have been formed. At the close of this period there were a wide range of different understandings of HRD (Lee 1997a), a range of different providers, a range of different stakeholders and needs, and the reasonably firm establishment of a national system that, despite being criticised by almost all parties, provided some coherence, and by its presence, fostered (belatedly?) the sort of fundamental debate that is often missing as a culture blindly develops.

Mid 1990s to fin-de-cycle. Labour achieved a landslide victory in 1997 which made crystal clear the culmination of gradual shifts in public aspirations. Previously, the UK was rocked by several food scares (salmonella in eggs, BSE in beef, Ecoli in prepared foods) each of which turned into political problems for the Conservatives, accompanied as they were with accusations of a potentially disastrous lowering of health standards, paucity of inspection processes, and misleading the public. What felt like an ever increasing number of financial and 'private' scandals, misuses of power, and other irregularities involving Conservative ministers gradually came to light and were particularly damaging because of the Conservatives election rhetoric promising a return to 'traditional family values'. In what was seen by many to be a piece of deliberate political manipulation and mis-information, the Conservatives appeared to try and use the wider European anti-British-food backlash (caused by health fears) and the all-pull-together bonding experienced during the Second World War (using sports fixtures against Germany) as a mechanism for increasing xenophobia, and thereby their own support. If this had been deliberate, then they badly underestimated the speed and nature of the changing culture of the UK. The Press and the general public reacted against the xenophobic messages and rejected the position of their own government in favour of developing more fellow feeling towards other Europeans.

The Labour landslide victory was won, at least partially, on messages of a 'new' nation – one with increased globalisation and representation, and on the renewal of social structures (particularly education and health). Labour appeared to promise a society in which individuals were cared for and supported in their choices, which was environmentally aware and responsible, in which honesty, the right to work and freedom of speech were to be of greater value than a reduction in tax or rampant free market profiteering. At the time of writing, it is unclear whether they will be able to enact all the apparent promises, though they have already been highly pro-active in devolution, education and health, and in setting the bases for a full overhaul of the social systems. They have also addressed the 'right to work', introducing structures and additional funding to facilitate the training and development of the totality of the workforce.

Organisations had also become disillusioned with the promise of the free-market, and overtaken with concerns on how to manage international competition and change, found themselves juggling the need for long term strategies with short term crisis management. Battling at the front line for survival in a constantly changing environment while attempting to meet developmental needs and environmental concerns through strategic planning called for a change in perspective and a way of managing in a world full of paradox (Davis 1990, Handy 1994, Senge 1990). They also backed (almost unanimously) the change to a government that promised islands of stability in the competitive market place, supporting situated enterprise and demonstrating their understanding of the importance of developing HR for organisational longevity.

In the last few years, therefore, growing concern about societal, environmental and technological changes culminated in a dramatic change of government to one in which the continuous development of 'human resources' was stated as a central strategic plank of government policy. In addition, this policy, which is essentially a proclamation of strategic HR (Lee 1997b), appears to have had the almost unanimous backing of large and small organisations, providers and individuals.

Forms of HR and Motivation. Whilst there has been debate about the details of Maslow's theory of motivation in its use as a universal concept, and in its hierarchical format (Hodgetts & Luthans 1991; Hofstede 1991), there is general acceptance of its overall structure, and therefore Stead & Lee (1996) suggest that it is appropriate to use changes in motivation, as described by Maslow, to illustrate one of the post-war trends in HRD in the UK. Immediately post-war, the developmental aspect of HRD did not exist as we know it now – then, the focus was on meeting the need for security and safety through focused national strategy and tight organisational structures, in which individual development was unregarded. During the 1950s and 1960s these concerns shifted to a national examination of the UK's relationship with the rest of Europe, to an organisational realisation of a competitive society, and an individual realisation of social class, and for all, the idea that achievement through shared responsibility was more fulfilling than financial incentive – in other words, the focus shifted to Maslow's 'social needs'. This corresponded with a desire for classification (knowing where we are) that became HR'M' to a desire for self-expression and self development (discovering where we might go) that became HR'D'. The 1970s and 1980s marked the shift from 'social needs' to the era of the status symbol and the free-market - the creation and meeting of 'esteem needs'. During the height of this period, nation, organisation and individual all appeared to adopt the rhetoric and stance of the entrepreneur. HR was about developing personal and organisational strategies for success, SWOT analyses and the achievement of 'excellence'. HR was now HRs (or HRS, depending upon how loudly you shouted!). Each of these propounded strategies for success assumed that the environment was controllable, and could be manipulated appropriately if the right tools were applied (in the same way that Maslow's need for esteem assumes that the needs for security and safety are already met). In the UK the 1990s brought the realisation that the environment was far-from-equilibrium (Lee & Flatau 1996) and uncontrollable, and that HR was central to any relationship (whether synergistic or competitive, Lee 1998) with the wider world, thus working with HR was a strategic act – leading to suggestions that SHR is substantially different from HRS, and that the SHR practitioner is most appropriately seen as a senior change agent.

Forms of HR and cohesion. In the account given above it is apparent that there are a range of stakeholders in HRD in the UK, and that cohesion of view and approach to HR across these stakeholders has varied over time. There have been three periods (post war structuralisation, free market entrepreneurialism and the new Labour re-socialisation) during which all parties have cohered behind or colluded with, a vision of the nation. In each case, this vision has been tied to a vision of how people should be developed and managed. The three coherent views of HR have, however, differed in their coherence – in the first it was assumed that all people should be taught and rewarded alike, a unitary view of people. In the second, it was assumed that all people were similar in their desire for expression, but that the focus of this might vary from person to person. In the third it is assumed that all people aspire similarly to the vision of a caring, sharing and prosperous society, but that individuals will have different desires, and can and should be treated differently. Around each of these periods of coherence have been others, in which the stakeholders have sought different objectives and have adopted different views of society and HR, and each of these remains to this day – national structures of academic qualification alongside national structures of competency; organisational/in house structures of competency alongside (and working with) sub-contracted providers and university provision; individual development from the skills to the spiritual, and so on. Following recent debates, it might be expected that the various groups are working towards integration, however, whilst a range of integrative initiatives have taken place, the main benefit seems to be a realisation that alongside confusion (and at times, chaos) there is also strength and flexibility in the diverse profile of HR activities and understandings that can be found in the UK at present… however, as a Brit attempting to put forward my own interpretation of events – I am, just possibly, a little partial.

Argyris C. & Schon D. (1978) *'Organisational Learning: A Theory of Action Perspective'*, Addison-Wesley

Ashforth B.E. & Humphrey R.H. (1993) 'Emotional Labour in service roles: The influence of identity' *Academy of Management Review* 18 pp.88-115

Burgoyne J.G. (1989) 'Creating the managerial portfolio', in *Management Education and Development* Vol 20, pp.56-61

Burgoyne J.G. (1990) 'Doubts about Competency', in *The Photofit manager in the 1990's*, ed. M. Devine, Unwin Hyman, London

Davis J. (1990) *'Greening Business'*, Blackwell, Oxford

de Bono E. (1970) *'Lateral Thinking'*, Penguin, London

Handy C. (1976) *'Understanding Organisations'*, Penguin, London

Handy C. (1994) *' The Empty Raincoat: Making Sense of the Future'*, Hutchinson, London

Herzberg F., Mausner B. and Snyderman B.B. (1959) *'The Motivation to Work'*, Wiley & Sons, New York

Hodgetts R.M. and Luthans F. (1991) *'International Management'*, McGraw-Hill Singapore

Hofstede G (1991) *'Cultures and Organisations'*, McGraw-Hill, U.K.

Huczynski A. & Buchanan D. (1991) *'Organisational Behaviour'*, Prentice Hall, London

Kinsman F. (1990) *'Millennium: Towards Tomorrow's Society'*, Allen and Co.

Lane J-E. and Ersson S.O. (1987) *'Politics and Society in Western Europe'*, Sage Publications, London

Laqueur W. (1992) *'Europe in our time: A history 1945-1992'*, Penguin Books, New York

Lee, M. M., (1996) 'Holistic Learning in the New Europe' in Lee, M. M., Letiche, H., Crawshaw, R., & Thomas, M., (Eds.) *Management Education in the New Europe*, London: I T P.

Lee, M. M. (1997a) 'Development: A critical reconsideration', in Burgoyne, J & Reynolds, M (Eds.) *Introducing Management Learning*, London: Sage

Lee, M. M. (1997b) 'Strategic Human Resource Development' in *proceedings of AHRD conference, Atlanta*

Lee, M M. (1998) 'Text, Gender and future realities' in Goodman, R. (Ed) *Exploring the Post-Industrial Sub-culture*, In Press.

Lee, M. M., & Flatau, M. (1996) 'Serial Logic in a Parallel World', in Mitzla, M. (Ed) *Facilitating ISO900 Training: Report for the European Commission*, Brussels: EC

Lessem R. (1986) *'Enterprise Development'*, Gower, Cambridge

MacGregor, D. (1960) *'The Human side of Enterprise'*, McGraw-Hill, U.K.

Manpower Services Commission (1981) *'A New Training Initiative'*, Mears Caldwell Hacker, London

Mintzberg H. (1973) *'The Nature of Managerial Work'*, Prentice Hall Inc., Englewood Cliffs

Mintzberg H. (1983) *'Structures in fives: Designing Effective Organisations'*, Prentice Hall

Morgan G. (1986) *'Images of Organisation'*, Sage Publications, London

Ohmae K. (1992) *'The Borderless World: Power and Strategy in the Interlinked Economy'*, Fontana, London

Owen H. (1987) *'Spirit, Transformation and Development in Organisations'*, Abbot Publishing

Pedlar M., Burgoyne J. and Boydell T. (1991) *'The Learning Company'*, McGraw-Hill

Peters T. (1987) *'Thriving on Chaos'*, Macmillan, New York

Peters T.J. & Waterman Jr. R.H. (1982) *'In Search of Excellence'*, Harper Collins, New York

Pickard J. (1992), 'Profile - W. Edwards Deming', June p.23, in *Personnel Management*

Porter L.W. & McKibben L.E. (1988) *'Management Education and Development'*, McGraw-Hill, New York

Revans R. (1980) *'Action learning: New Techniques for Management'*, Blond & Briggs, London

Senge P.M. (1990) *'The Fifth Discipline'*, Doubleday, New York

Stead, V., & Lee, M. M., (1996) *'Inter-cultural Perspectives on HRD'*, in Stewart, J., & McGoldrick, J. (Eds.), *Human Resource Development: Perspectives, strategies and practice*, London: Pitman.

Story J. (1993) 'Europe in the global state and market system' pp. 3-61, *in The New Europe; Politics, Government and Economy since 1945*, ed. J. Story, Blackwell Publishers, Insead

Taylor F.W. (1947) *'Scientific Management'*, Harper & Row, New York

Toffler A. (1970) *'Future Shock'*, Pan Books Ltd., London

Weber M. (1943) *'The Theory of Social and Economic Organisations'*, Free Press

Human Resource Development in the UK - a review of the literature

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This paper takes as its focus an examination of the position selected texts take in acknowledging the multiplicity of individual identities. The texts chosen represent some of the influential sources of ideas upon HRD in the UK, but constitute a very personal choice, and therefore serve partly to reveal the author's own views and beliefs in the nature of HRD. The notion of human 'becomings' is introduced as a way to make sense of multiple identities and it is argued that HRD must retain its interdisciplinary perspective in order to remain an influential and positive force within all types of organisation.

When I was first asked to write a literature review of texts influential upon Human Resource Development in the UK I was faced by a number of dilemmas. The first of those dilemmas centres upon the difficulty I have in working to the concept of Human Resource Development (HRD). This is probably better explained by my concern that my understanding of HRD is likely to be different from anyone else's, and that because of this others in turn will not understand my understanding. As Monica Lee suggests (Lee, 1997), when trying to understand the word 'development' alone, much confusion arises because the different interpretations of this word (Lee outlines four interpretations: as a maturation process; as a shaping process; as a voyage of exploration and as emergent), are 'associated with a distinct value-base and view of 'life''. Equally, my understanding of what is meant by 'Human Resources' is likely to differ from any one else's due to my own value base and view of life. The combination of these three words into the term Human Resource Development simply adds to the confusion and results in a variety of interpretations. These range from those that have their value base rooted in the philosophy of scientific management, to those whose philosophical underpinning is influenced by postmodern and/or poststructuralist interpretations of the world with its attendant view of the death of the 'subject'.

Another dilemma relates to the fact that "HRD is a relatively new concept which has yet to become fully established and accepted, either within professional practice or as a focus of academic enquiry" (Stewart & McGoldrick 1996: 1). As such, there are no shibboleths of HRD, no pillars of seminal texts which I could quickly look up to and declare with certainty that these are *the* texts which have been influential in shaping HRD theory and practice in the UK. The picture is much more undefined than that, consisting of many fuzzy and indistinct areas with no recognisable boundaries. This lack of distinctiveness can, of course, be frustrating - especially when attempting to describe concisely what HRD 'is' to interested enquirers from outside the field. My own view is that it is this very lack of boundaries, HRD's 'newness', which make it such an exciting field within which to work and write thereby giving it a distinction of its own. My own perception of the interdisciplinary nature of the field will become apparent as the course of this paper unfolds, but suffice it to say at this point that Human Resource Development does not limit itself to 'managerialist' literature or that rooted in the predominantly short-term functionalism of training. HRD has evolved, and been shaped by, nations' values and events (Stead & Lee 1996), and as such its future make-up and direction will also be shaped by values and events which we (as humans), subsequently seek to make sense of through the social sciences, the arts and humanities and processes as explained within the natural sciences.

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By giving you - the reader - an account of my confusions as a writer in approaching the composition of this paper, *you* will have reached your own understanding of *my* confusions. My reason for relating the angst I experienced is partly to serve as an exemplar of how my understanding of HRD has developed. In short, my view of HRD has not been a linear, rational process. My interest and research in the HRD field has been influenced and shaped by my own psychological make-up, as formed through genetic and social processes. Please note here that is not my intention to enter the 'nature versus nurture' debate on human development, merely to demonstrate my belief that one's *self* is a complex whole, influenced by many processes - both *in*ternal and *ex*ternal (see Sawday 1997, for a discussion of the rise of the notion of corporeality and embodiment in the 17th century). Given this background, the literature review I offer to you in this paper concerning HRD in the UK is necessarily a partial one. It is my interpretation of aspects of texts, which interest me. Aspects and concepts that I believe need to be addressed in order that my vision of HRD may come to fruition. Such an (ambitious) undertaking contains biases and idiosyncrasies, which even if I was able to (and I don't believe I am), I do not wish to eliminate. As such, this review is somewhat self-indulgent, and maintaining the paper's hitherto focus on my*self* will take as its conceptual thread the shaping of individual identity. That is, to what extent do texts relevant to HRD in the UK context acknowledge how the shaping of individual identity is influenced by, and is influential upon, strategic HRD processes?

Identity and Human *Becomings*

> For human beings are the kinds of creatures who have no universal ontology, no essence whether this be spiritual or genetic. Our ontology is historical: it is both temporal and spatial. What humans are - perhaps better, what human beings are capable of, what we can do - is variable, historical, situational - not an originary 'being' but a mobile 'becoming'. (Rose, 1997: 234)

Rose's quotation is taken from a chapter in which he charts the development of what he terms the 'psy sciences' (for example: psychology, psychiatry, psychotherapy), which form part of the process of individualism, generally acknowledged to have begun during the Enlightenment in the 17th century. Rose's argument is informed by the work of Foucault who argued that "contrary to the claims of its champions and to customary understanding - (the Enlightenment was) not an emancipation from social fetters but the very means by which the state locked subjects into bureaucratic and administrative systems, by stamping them with a clear and distinct *identity* (my emphasis) (Porter 1997: 11). From this standpoint therefore, Rose's view is that these 'psy sciences' subject the individual to normalization - "our prized individuality is truly a tool of social control" (ibid). However, what this quotation also serves to illustrate is the idea that human beings are not static, independent entities. I, for example, am a very different person now from the one I was at the age of ten, both in terms of physical and psychological make-up. To replace the term human beings with human 'becomings' immediately dislocates our day-to-day, taken-for-granted perception of ourselves and others, creating a much more powerful image of the shaping of individual identity. A human who is constantly 'becoming' is also one subject to many influential processes, whether these be - to name but a few - social, political, historical or economic. Consequently, a human *becoming* is a fragile entity, which when grounded in the organisational world becomes infinitely complex, displaying multiple identities. By taking a view of HRD from the perspective of human *becomings*, we can gain insights into HRD as a strategic process concerned with the sustainability of all types of organisation.

It is therefore from this perspective - the view of human beings as human *becomings*, correspondingly acknowledging multiple individual identities - that I will now begin an exploration of literature, which is influencing HRD in the UK.

Influences upon HRD in the UK

I take as my starting point for this exploration the end of World War II. We can see at that time, broadly speaking, hierarchically structured organisations, ordered and based on Taylor's scientific principles of organisation and management. Both national and organisational needs at that time were focused on increasing production and restabalising industry as quickly as possible. The immediate post-war approach to training and development 'emphasised a systematic, ordered and planned approach' (Stead & Lee 1996: 51). In terms of the motivation of employees, the underlying assumption held that individuals were motivated by financial reward and a straightforward rational approach. The need for post-war stability required the rapid re-skilling of the workforce, but little was done to educate managers in a hierarchical model, which emphasised control from the top. According to Cox and Cooper's 1988 study of management students, attitudes towards managerial work appeared to have changed little. Their study demonstrated that there continued to exist the belief that managers have 'a right to manage ... the right to order about another part (of the community) who then do as they are told' (Cox and Cooper quoted in Williams 1996: 262). This suggests a perception of the manager as 'expert' who required no further education and development to assist him/her in his/her work role. However, the dearth of management education programmes up until the early 1990's in Britain had become a concern. In 1987 two reports were produced, one by Charles Handy, the other by Constable & McCormick for the Institute of Management. Both highlighted that managers in Britain 'lack the development, education and training opportunities of their competitors' (Institute of Management 1987: 3). There followed a rapid increase in management education provision in the UK with the majority of business and management schools offering both full-time and part-time MBA courses - based on the US model. However, the type of provision offered has been increasingly criticised since the early 1990's (Alvesson & Wilmott 1992, 1996; French & Grey 1996).

I give a brief outline of the development of management education for the reason that the founder of Action Learning - Reg Revans - was making similar criticisms in the 1960's towards management education expressed now. His sceptical view of the relevance and effectiveness of management education programmes was based on his philosophy that people can learn as much from each other, as they can from the notional expert (Revans, 1980). Revans' work on the development of action learning began in the newly nationalised coal board in 1946. Just at the time that the majority of organisations' training and development needs were being supplied by systematic training, Revans was working with mining students and formulating his belief that they could learn with and from each other in solving work-based problems. The fact that '... of a class of some 25 students on an HRD (MSc in HRD) course there were but half a dozen or so who had direct experience or knew something about action learning sets other than through the reading of the course literature' (Williams 1996: 261) is therefore surprising given that Revans began his work in 1946. Williams suggests that action learning sets have, up to this point, occupied a 'rather specialist place ... in organisation's management development programmes', but believes that this may change as action learning sets become more prevalent in postgraduate and post-experience courses.

At this point it is worth exploring what is meant by action learning, and reflecting upon why it appears to have occupied a 'specialist place' in organisations up to this time. One definition of Action Learning offered by McGill and Beaty is that it 'is a process of learning and reflection that happens with the support of a group or 'set' [illegible]olleagues working with real problems with the intention of getting things done' (McGill & Beaty 1992: 11). The focus on 'getting things done' infers that each problem has a solution, and that if we 'overcome the tendency to be passive toward the pressures of life and work' (ibid) we will be able to discover and implement that solution. It must be acknowledged at this point that McGill & Beaty's book is a guide to action learning only. As they point out in their first chapter, it is not the intention of their work to describe the theory of action learning. Rather their concern is to provide a guide to those 'who wish to introduce the idea to their colleagues and for those who wish to take part in action learning for effective personal learning and development' (ibid). Whilst recognising the authors' intentions in producing their work, I believe it is still legitimate to address the place such a work has within the HRD field. To return to the conceptual thread of this paper outlined above, in what way does this text contribute to a view which perceives humans as *becomings* as opposed to beings?

If we acknowledge that part of the action learning philosophy is getting things done, the question then arises as to how these things 'get done'. McGill & Beaty view the action learning process as one which enables managers (following Pedler et al (1991), they take a broad definition of managers and include within it people who take responsibility for their lives), to develop and effect personal change. It is thus a process, which enables and empowers managers to engage with the complexities of their work and roles. They also view action learning as a social process - learners are not learning by themselves but with others. As such, action learning 'encourages set members to take responsibility for their world, which with the social element of action learning enables the set member as manager to empower herself' (ibid: 184). If we take two of the main elements of McGill & Beaty's definition of action learning: getting things done, and empowering managers; ostensibly it is a process that equips managers (here I am adopting the authors' broad definition of managers), to be able to survive relatively healthily within organisations. The welfare and interests of the individual appear paramount within this definition in that action learning encourages him/her to become an autonomous and dynamic entity within an organisation. In empowering managers therefore, action learning would appear to acknowledge individuals' continuous evolvement.

Nevertheless, another underlying assumption within McGill & Beaty's work, but one, which is made less explicit, is the link between the individual and the organisation. In terms of human *becomings*, action learning as outlined by them does not readily acknowledge that individual identity is shaped by events and processes outside the organisation as much as within the organisation. The individual-organisational link also raises the question as to how 'empowered' managers can be within organisations where they are required to 'get things done' ultimately to the benefit of the organisation. In cases where individuals feel their values or ethical concerns are being compromised, the social element of action learning could lead to a degree of conformity concerning the 'rights and wrongs' of a particular situation. In other words, the pressure to 'get things done', alongside the dynamic social processes within an action learning set, could lead to an individual feeling pressurised to act in a way contrary to his/her own values. In addition, the emphasis upon the individual as located within the organisational space fails to acknowledge wider processes, which require consideration in a strategic vision of HRD. If we are to move beyond the reactive tendencies of traditional training and development interventions those involved in HRD must recognise that their actions need to take into account the emergent nature of strategy and its 'interactions within the organisation and *across* (my emphasis), its boundaries' (Fredericks & Stewart 1996: 103).

McGill & Beaty's guide to action learning possibly presents itself easily to theoretical criticisms because it is, in essence, a practical guide for practitioners on how to run action learning sets. In one sense my criticisms of it could be seen to constitute an example of the theoretician-practitioner divide. However, if we view action learning as a practical concept, there is nevertheless within the action learning literature a number of texts which develop a more in-depth theoretical justification for their use of action learning in specific contexts, and in so doing demonstrate the necessity for reflection in action. Lee et al's (1996a) text *Management Education in the New Europe*, immediately takes us beyond the internal organisational context through its title alone. The book describes and analyses the role of the authors in 'fostering management education in Central Europe since 1989' (ibid: 8). Whilst the editors are faculty within British and Dutch universities, the book includes contributions from the central European 'recipients' of the 'purveyors' of western management knowledge, thereby acknowledging them as 'active participants in a debate' (ibid: 4). The book reflects the anxieties of those from the west in being viewed as 'experts' by their central European colleagues. Indeed, as the editors point out in their introduction, as contact between management educators from western and central Europe increased, they came to realise that 'Western management knowledge did not transplant easily to an environment where market share, competition and product quality were more or less alien concepts at the corporate level but operated ruthlessly at the level of the individual entrepreneur.' (ibid: 4). Given this level of complexity, the western authors adopted an action learning based approach to their programmes.

This geographical re-location of an educational concept developed in Britain requires the reader, with the authors, to reflect upon the potential for action learning to work as a strategic tool, thereby taking into consideration wider environmental processes operating outside the specific organisational space. Action learning has thus crossed the boundaries referred to by Fredericks and Stewart, and demonstrates its potential as a tool for reflective HRD practitioners.

What the experiences, and reflections upon these experiences, in Lee et al's text highlight is that whilst action learning is perceived to be an approach which 'empowers' managers to 'get things done', as Lee suggests (1996b), it 'leaves open the question of how much flexibility individuals have in taking action within their own culture, whilst under the implicit constraints and expectations placed upon them by a methodology and other participants who are coming from a different culture' (ibid: 253). Here Lee is referring to national culture, but is a consideration that is equally valid in terms of organisational culture. In a culture (whether this be a national or organisational culture), which has traditionally imparted decisions from the top, how can we be sure that individuals will be able to move away from this hierarchical approach to one which views that true development and change is best 'fostered by helping individuals to help themselves' (ibid: 253)? Connolly's (1996) account of his attempt to implement action learning sets with the hierarchical structure of the British police provides a good example of the problems associated in implementing action learning referred to by Lee. He formed an action learning set with police officers of the same rank (Inspector level) with the intent of working together on strategic issues relevant to Cumbria Constabulary. Whilst the sets met on a number of occasions, no 'action' appeared to be taken from one set meeting to the other. Connolly concluded that the hierarchical culture within the police was so strong, that his fellow police officers were unwilling to take initiative for actions in which they were required to consult those above them in the organisational structure. The suggestion is therefore, that in order to implement a methodology, which encourages 'individuals to help themselves' with a view to 'getting things done', requires 'strategic and structural change in the organisation' (ibid).

What both Connolly's and Lee's work demonstrates is that action learning as a methodology cannot be implemented without due consideration to broader strategic processes. Here we return to the necessity for HRD to be an interdisciplinary concept, whose roots stretch beyond functionalist training and development methodologies to encompass the concept of strategic HRD.

Strategic HRD

If some texts on action learning ignore the boundaries of individuals' power within organisational structures - even though McGill & Beaty (I use them as an example only), consider action learning to be empowering - we need to consider what other elements form the basis for HRD.

Indeed, if HRD is to contribute to the continued survival and growth of work organisations it needs, Fredericks and Stewart argue, to 'gain impact at a macro, organisation-wide level' (Fredericks & Stewart 1996: 101). To do so, they argue, it is necessary to take a strategic view of HRD, which is 'concerned with exposing, examining, questioning and challenging the nature and extent of (individual) action possibilities as a contribution to facilitating the continuous development of organisation capability to support long-term survival' (ibid: 118). Fredericks and

Stewart outline three 'critical concepts' that form the basis for their model of HRD: organisation design; organisation strategy and management/leadership style. The first of these concepts is organisation design, and in examining the role of design they argue that each of the prescriptions and analyses concerning the design of work organisations contains underlying assumptions about the author's/designer's views of social reality and human existence. The nature of these assumptions becomes critical when considering the structural arrangements of organisations (Fredericks & Stewart view prescriptions for organisation design as synonymous with prescriptions for organisation structure), as they govern the way individual members of an organisation relate to one another, often based on authority relations (Giddens 1979, 1989). Authority relations 'have the effect of setting limits, or constraining, the actions and behaviour or individual organisation members ... and are maintained by the participation of individuals in those arrangements' (Fredericks & Stewart 1996: 103).

The second of Fredericks & Stewart's key concepts is organisation strategy. Whilst acknowledging the views of some authors (Knights & Morgan, 1990, 1991) that organisation strategy can be synonymous with organisation structure in its way as acting as a control mechanism of some organisation members to the benefit of others, their own view is that strategy 'is always 'realised'; that is strategy emerges over time as a 'stream of actions and interactions within the organisation and across its boundaries' (op cit). They subsequently define organisation strategy to be 'those organisation decisions and actions which are intended to and/or have an impact on the long-term survival of the organisation within its operating environment'.

The third key concept:management/leadership style recognises the role of the individual manager operating within the organisation. Its inclusion within their model of strategic HRD acknowledges that when we speak of 'organisation decisions what we really mean is management decisions' (ibid: 104). Therefore, management style impacts upon organisation strategy in that it is based on the beliefs and values held by individual managers.

Having established the foundational concepts for their model of strategic HRD, Fredericks & Stewart go on to elaborate this model by examining the relationships and connections between organisation structure and strategy, and subsequently the impact of management style on this relationship. Their distinction of management styles into two broad categories: styles based on a belief in conformance, and those based on a belief in enabling; creates a stronger focus on either strategy or structure. The authors take the view that neither style is better or more effective than the other, rather the appropriateness of either style is contingent upon the particular situation.

Without focussing directly upon Fredericks & Stewart's elucidation of their vision of strategic HRD, we can see that their work does begin to foster recognition of the notion of human *becomings*. The multiple identities of individuals within organisations, including the recognition that these identities are in part shaping, or becoming, outside the organisation is acknowledged in their discussion of their key concepts of organisation design, organisation strategy and management styles. The focus placed on management style in particular explicitly acknowledges that the way a manager conducts him/herself is based on his/her own values and beliefs. These values and beliefs are formed, at least partially, by national culture and the concomitant value base of each individual nation. The surfacing of these 'mental models' (Senge, 1990), and the acknowledgement of their influence upon organisations, begins to create a concept in which the diversity of human *becomings* is awarded a temporal, locational and emotional space.

Conclusion

The difficulty in writing a review of texts relevant to HRD in the UK is created by the interdisciplinary nature of the field, a feature which whilst creating difficulties for this particular author also constitutes its major strength. Through the exposition of the dilemmas I faced in constructing this review I hope to have demonstrated the complexity of issues faced by those involved in the HRD field. The theme of human *becomings* was adopted as a way to begin to make sense of the multiplicity of individual identities - identities that require thoughtful and reflective acknowledgement by organisations in order that they become environmentally sustainable. The viability of organisations as sustainable entities was seen to require a strategic approach to HRD in which a number of key concepts need to be considered including: organisation design, organisation strategy and management/leadership style.

Whilst principally presented as a literature review, this paper is necessarily a subjective piece of work, which reveals my own biases as to what I think HRD *should* be. In stating this however, I wish to make clear that it is not my belief that I have the right to impose my views on others. Rather, that when any one individual makes a claim to knowledge it is a reflection of one of their identities, and that particular identity is itself in a process of *becoming*. Such processes require consideration from those involved in HRD, if HRD is also to remain in a process of *becoming* and create sustainable organisations in which people wish to work or become involved.

References

Alvesson, M. & Wilmott, H. (eds) (1992) Critical Management Studies, Sage, London

Alvesson, M. & Wilmott, H. (1996) Making Sense of Management, Sage, London

Burgoyne, J. & Reynolds, M. (1997), Management Learning: integrating perspectives in theory and practice, Sage, London

Connolly, M. (1996) Action Learning Initiative, paper presented to Cumbria Constabulary Policy Group

French, R. & Grey, C. (eds) (1996) Rethinking Management Education, Sage, London

Giddens, A. (1979) Central Problems in Social Theory, Macmillan, London

Giddens, A. (1989) Sociology, Polity, Cambridge

Handy, C., Gordon, C., Gow, I. & Randlesome, C. (1987) Making Managers, Pitman, London

Institute of Management (1987) The Making of British Managers, prepared by Constable, J. & McCormick, R.

Knights, D. & Morgan, G. (1991) The Concept of Strategy in Sociology: A Note of Dissension, Sociology, vol. 24, no. 3

Lee, M; Letiche, H; Thomas, M; Crawshaw, R (1996a) Management Education in the New Europe, ITP, London

Lee, M. (1996b) Action Learning as a Cross-Cultural Tool, in Stewart, J & McGoldrick, J. (eds), Human Resource Development: Perspectives, Strategies and Practice, Pitman, London

Lee, M. (1997) The Developmental Approach: a critical reconsideration, in Burgoyne, J. & Reynolds, M., Management Learning: integrating perspectives in theory and practice, Sage, London

McGill I & Beaty, L (1992) Action Learning: a practitioner's guide, Kogan Page, London

Pedler, M.; Burgoyne, J. & Boydell, T. (1991) The Learning Company, McGraw-Hill, London

Fredericks, J. Stewart, J (1996) The Strategy-HRD Connection, in Stewart, J. McGoldrick, J. (eds), Human Resource Development: Perspectives, Strategies and Practice, Pitman, London

Porter, R. (ed) (1997) Rewriting the Self: Histories from the Renaissance to the Present, Routledge, London

Revans, R.W. (1980) Action Learning: new techniques for management; Blond & Briggs, London

Rose, N. (1996) Inventing Our Selves: Psychology, Power and Personhood, Cambridge University Press, Cambridge

Rose, N (1997) Assembling the Modern Self, in Porter, R. (ed) Rewriting the Self: Histories from the Renaissance to the Present, Routledge, London

Sawday, J (1997) Self and Selfhood in the Seventeenth Century, in Porter, R. (ed) Rewriting the Self: Histories from the Renaissance to the Present, Routledge, London

Senge, P (1990) The Fifth Discipline: The Art and Practice of the Learning Organisation, Century Business, London

Stead, V. & Lee, M. (1996) Inter-cultural perspectives on HRD in Stewart, J. & McGoldrick, J. (eds) Human Resource Development: Perspectives, Strategies and Practice, Pitman, London

Stewart, J. McGoldrick, J. (eds) (1996), Human Resource Development: Perspectives, Strategies and Practice, Pitman, London

Williams, S. (1996) The Role of the Action Learning Set, in Stewart, J. & McGoldrick, J. (eds) Human Resource Development: Perspectives, Strategies and Practice, Pitman, London

COBRA, an Electronic Performance Support System for the analysis of jobs and tasks

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In this research project the concept of "Electronic Performance Support Systems" will be introduced. An Electronic Performance Support System (EPSS) is an integrated computerised environment that supports and occasionally monitors employees while doing their jobs. In general an EPSS contains the following for components: tools (to perform an job), information (needed to do the job correctly), advice (for the difficult parts of the job) and training (to extend the employees knowledge and skills). In this study the effectiveness of an EPSS for instructional designers is reported.

Advances in information and communication technology have led to the introduction of new technologies in the area of training, such as Computer-Based Training (CBT), multimedia, CD-I and CD-ROM. Various forms of computer technology have been used as a training medium, with varying degrees of success. The most recent developments are based in part on ideas relating to the concept of 'the learning organization'. The benefits that computers offer, integrating working and learning with new technology, in the form of Electronic Performance Support Systems (EPSS), form an important point of departure here. EPSS is principally intended for employees who depend on a computer for carrying out their job. Apart from performing the usual tasks with programs that process data (tools), the computer also provides the employee just-in-time with information, advice and training (see figure 1).

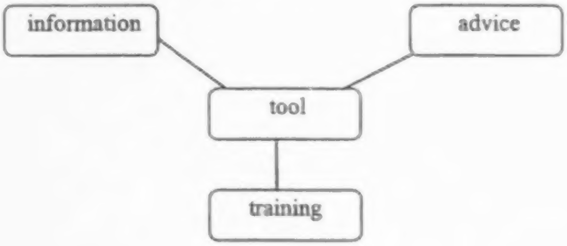

Figure 1

A diagram of the components of an EPSS

The potential advantages of learning with EPSS are considered to be a more active learning process, more concrete forms of learning, an increase in the transfer of what has been learned to the workplace and a reduction in learning time (Gery, 1989, 1992; Raybould, 1990, 1991). The potential advantages of working with EPSS relate to the higher quality and higher productivity that may be achieved.

Problem Statement

Although in the literature opinions on EPSS are on the whole positive, some objections are raised

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that deserve closer examination. Learning at the moment that this is necessary (just-in-time) ensures that employees are trained in small units of subject matter. This may well be a disadvantage when training novices, who appear to benefit from having an overall picture of the subject matter, which may serve as a stepping stone to new knowledge.

Another problem is a very demanding working environment (pressure of work), where employees do not have time to look up information, and thus have no time to learn.

The long-term effect of using EPSS may be that employees will come to rely on the computer and, consequently, no longer learn actively themselves. Employees will then get out of the habit of acquiring knowledge and skills of their own, because this would no longer be necessary.

Research Questions

This study focuses on EPS-systems, which may in theory possess the advantages for working and learning described above. In the study, instructional designers were provided with an EPSS and research was carried out into the effectiveness of the EPSS compared with traditional methods of working and learning.

The questions we try to answer are the following:

- What are the needs of instructional designers to fulfil by EPSS when they are executing a job or task analysis ?
- What are the effects of an EPSS on the information use?
- Do instructional designers who work with an EPSS perform better than instructional designers who work the traditional way?
- Does an EPSS have an effect on 'training'? Do people learn more (compared with an control group trained the traditional way)?
- What do employees like and what don't they like about EPSS?

Methodology

The general research question that will be discussed is as follows:

What is the effectiveness of learning and working with Electronic Performance Support Systems compared with traditional methods of training and working?

The reason for deciding to conduct this research lies in the fact that to date scarcely any empirical-analytical research has been carried out in the area of the effectiveness of EPSS. Both the advantages and disadvantages that are mentioned are therefore mainly of a hypothetical nature. It is relevant to analyze these expectations and to assess them on the basis of empirical research. Based on the problem exploration the following groups of relevant variables have been defined: working, learning, EPSS and environment. The relationship between the different variables is shown in figure 2.

In the study, attempts were made to develop an ideally typical EPSS to support training officers or instructional designers when carrying out job and task analyses. A comparison was made between working and learning with EPSS and working and learning in the traditional manner. The results of the summative evaluation were studied, as were the routing of users through the program and the use of various resources.

It would appear in a study of EPSS that many factors exert an influence. In business organizations in particular, external control over (intervening) variables is limited (Bastiaens, Nijhof & Abma, 1995; Bastiaens, Nijhof, Streumer & Abma, 1997). In this study, which took place at the University of Twente, attempts were made to stabilize factors. However, this was not a purely experimental design, since randomization was not possible.

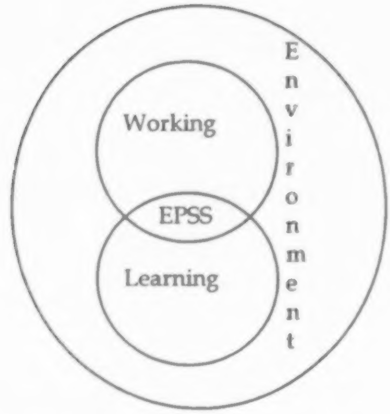

Figure 2: A diagram of the variables

As a result of the above obstructive factors, the research had a quasi-experimental design. This is a design that is often used in research, where control over the influence of external intervening variables cannot be complete, or where the researcher is working with an existing group classification. Table 1 represents the general design of the quasi-experimental study. It is a post-test-only design with non-equivalent groups. Due to practical reasons it was not possible to hold a pre-test.

Table 1

Basis for the study, the post-test-only design with non-equivalent groups

X1	O1	O2	O3
X2	O1	O2	O3

O1- post-test (learning outcomes)
O2- post-test (Questionnaire)
O3- post-test (performance)

X1- treatment 1
X2- treatment 2

In this project an EPSS was developed, formatively evaluated and revised. After that an summative evaluation was carried out in an quasi-experimental setting. During the evaluation the experimental group (n=14) was working and learning with the EPSS. The control group (n=12) was working and learning the traditional way (pen-paper based, classroom training).

After the treatment, data was collected by questionnaires. The outcomes of an assignment were reviewed by three curriculum experts and a learning test was taken. In the paper we try to give an answer on the research questions stated above.

The Theoretical Construct

The conceptual framework which included constructs has been extracted from an similar research project that was carried out earlier (Bastiaens, Nijhof, Streumer & Abma, 1995, 1997). The constructs enclose the variables that exert an influence on the EPSS. Working , learning, treatment and background will have an effect. In table 2 we define our variables. Work, learning, information use and background are general constructs for every treatment. COBRA and Class are specific for the treatment. COBRA is the name of the EPSS program. COBRA provides information, advice and training to users while they are performing their tasks (e.g. develop a job- and task analysis). Class refers to the classroom instruction.

From the constructs variables are derived from which items are formulated. These items were used in questionnaires and given to the instructional designers.

Table 2: A list of constructs

Constructs	Variables
WORK	
Quality	Quality of the assignment
LEARNING	
Output learning	Learner results
COBRA	
Communication	Interface
Help	Experienced action
Training and support	Training, support
Pedagogical/didactic dimensions	Structure, experienced validity, co-operative learning
Effects	Self-confidence, problem solving, applicable
CLASS	
Training and support	Training, support
Pedagogical/didactic dimensions	Structure, experienced validity, co-operative learning
Effects	Self-confidence, problem solving, applicable
INFORMATION USE	
While working (on assignment)	Taking and using notes, articles
Acquire new information	procedural information, content
BACKGROUND	
Working attitude	Motivation, satisfaction
Performance	Independence
Knowledge, skills and attitude	Relevance for job
Way of learning	Processing, guidance, study conceptions, extrinsic, motives
Experience	study results

Results

When an opinion is given about the EPSS we consider the results of the experimental group (working and learning with COBRA) as representative. For an opinion on traditional working and learning we consider the control group (CLASS) as representative. The independence of the groups has to be assured in order to be able to use the data. We had to test the reliability of the items involved. The limit was 0.60 (Cronbach's alpha). The variables that were useful ($\alpha > .60$) are shown in table 3.

Table 3 shows no reliability for the constructs working, learning and information use. The quality for working was measured by the quality of an assignment and reviewed by three curriculum experts. The output of the learner was measured on a test and the information use was observed and the sources were counted.

First the independence of the two groups had to be tested on background. Two variables passed the limit of $\alpha > .60$. As a result working attitude ($\alpha = .75$) and way of learning ($\alpha = .70$) were tested. No significant difference was found on working attitude (Mann Whitney test, U= 64.5, $\overline{R}1=13.14$, $\overline{R}2=11.96$, $p > .05$). Also, no significant difference was found for the way of learning (Mann Whitney test, U= 47.7, $\overline{R}1=16.54$, $\overline{R}2=10.89$, $p > .05$). Although we also collected the data of the other

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variables and interpret their means and standard deviations we will not go into detail and therefore leave this variables out of consideration in this paper. The conclusion from this tests are that there is no difference between the control and experimental group on background.

Table 3: The variables used and Cronbach's Alpha

Constructs	Variables	α
WORK		
Quality	Quality of the assignment	-
LEARNING		
Output learning	Learner results	-
COBRA		
Communication (.74)	Interface	.74
Help (<.60)	Experienced action	.59
Training and support (.68)	Training, support	.58,.85
Pedagogical/didactic dimensions (<.60)	Structure, experienced validity,	.27,.68,
	co-operative learning	.80
Effects (<.60)	Self-confidence, problem solving,	.53,.61
	applicable	.27
CLASS		
Training and support (.77)	Training, support	.72,.58
Pedagogical/didactic dimensions (<.60)	Structure, experienced validity,	.26,.81
	co-operative learning	.72
Effects (<.60)	Self-confidence, problem solving,	.53,.61
	applicable	.27
INFORMATION USE		
While working (on assignment)	Taking and using notes, articles	-
Acquire new information	Procedural information, content	-
BACKGROUND		
Working attitude (.75)	Motivation, satisfaction	.43,.73
Performance (<.60)	Independence	.73
Knowledge, skills and attitude (<.60)	Relevance for job	.61,.23,.09
Way of learning (.70)	Processing, guidance, study conceptions,	.63,.44,.25
	extrinsic, motives	.62,.54
Experience	study results	-

Hypothesis Related to Learning. The reliable items were used to give an answer on the hypothesis. We also used the data from the learning test and the assignment. The hypothesis related to learning expected the experimental group (working and learning just-in-time with an EPSS) to have higher learner results. The learner results on the test (t-test, $t=2.71$, $df=24, p<.05$) showed us a significant difference between the two groups. It appeared that the control group (trained in a classroom) had higher learner results then the experimental group. The EPSS group didn't learn as much as the group trained in a classroom.

Hypothesis Related to Performing. When we looked at the performance the following hypothesis was stated; The quality of the assignment (performing a task analysis) from the experimental group is higher then the assignment of the control group. The end result of the assignment was reviewed by three curriculum experts. Table 4 shows the opinion of the experts and gives the mean scores and standard deviations per group.

Table 4: The score of the groups on the assignment

	Expert 1		Expert 2		Expert 3	
	M	s.d.	M	s.d.	M	s.d.
Control group	6.50	2.47	7.58	2.31	5.54	2.17

Experimental group	15.43	1.99	15.43	1.99	13.68	2.52

The mean scores are significantly different. The experimental group with the EPSS has a higher score on the assignment. The t-test supports this (t= -10.07, df=24, p<.05). The quality of the assignment from the EPSS group is significantly better.

Hypothesis Related to the Time-on-task. It is expected that the time-on-task is less when working with an EPSS. The hypothesis is; the experimental group is spending less time on a learner test and on the assignment (while working) then the control group.
When we look at the time we see that the experimental group is spending more time on the learner test then the control group (M1=17.27, M2= 19.36, t-test, t=-.99, df=16.10, p>.05). On the other hand the control group is spending more time on the assignment (M1=107.27, M2=97.00, t-test, t=1.13, df=23, p>.05). Both differences are not statistically significant.

Hypothesis Related to Training and Support. The hypothesis on training and support is that the users of the EPSS were more satisfied about the training component of the EPSS and about the on-the-job support of the EPSS than the control group is about the traditional way of training and support. The mean rank of the control group is 15.21 and the mean rank of the experimental group is 12.04. It appears that there is no significant difference between the two groups (Mann-Whitney test, U=73.5, p>.05). Both groups are equally satisfied about the support and training facilities of their treatment.

Monitoring of the Working Process

To get an insight in the use of all the facilities the EPSS provides, we build in a monitoring function. The working process of the EPSS users (n=13) is translated to graphs and mutually compared. Figure 3 is an example of a route.

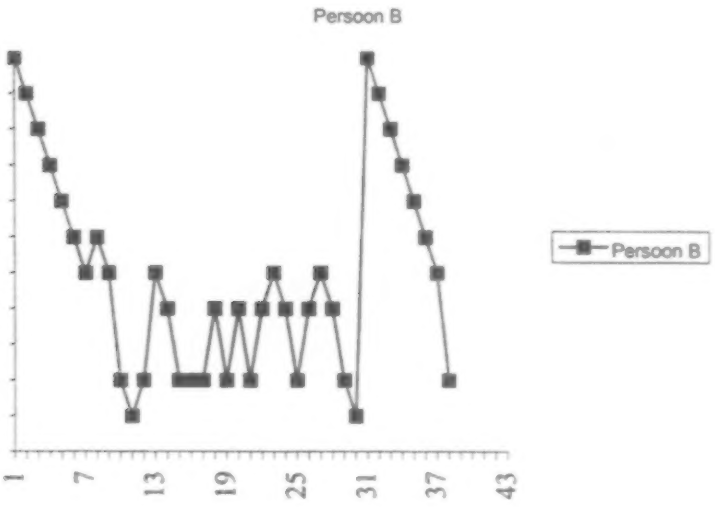

Figure 3: A way of working with the EPSS

It is surprising that when we look at the data of the thirteen users we see that the help component is used 58 times on 886 actions. That is a mean score of 4.46 times per user (s.d.=3.57). The CBT or learning component is used 16 times on 886 actions. That is a mean score of 1.23 times per user (s.d.= 2.05). We can state that these components are not used very much.

Conclusions

The effects of working with EPSS In the study the EPSS contained TOOL, INFORMATION and CBT components. The EPSS group in this study produced a significantly better end product than the control group. It is assumed that this can be ascribed to the structured EPSS environment, in which the tasks to be performed were split up into sub-tasks. A task is less complex once it can be divided into parts. As far as time is concerned, the group working with EPSS did not prove to be significantly faster in completing the assignment. Although many tasks were performed automatically by the computer, no gain in time was recorded. This can probably be explained by the fact that the EPSS group still had to look up all the information itself while working and, at the same time, had to learn how to operate the EPSS, which slowed down job performance. The control group, which had already received training preceding the assignment, was able to get down to work immediately. If one looks at the support provided, then the EPSS group appeared to have made very little use of the CBT and INFORMATION components. When one of the two components was indeed consulted, this occurred during specific parts of the program that were regarded as difficult (when the user encountered a problem).

Effects of learning with EPSS The results of the effectiveness study revealed that the control group that had received whole-class training scored significantly higher in a test of their knowledge than the group that had been learning with EPSS. Contrary to expectations, EPSS proved not to produce higher learning outcomes. Quite the reverse, in fact. The learning outcomes of the control and experimental groups indicated that 'learning with EPSS' is less effective than 'learning in the traditional manner'. One reason for these disappointing results from the EPSS group may well be the scant use of the INFORMATION and CBT component in the EPSS. Moreover, the monitoring process revealed that the experimental group only consulted the support sources when a problem was encountered in practice, which is, in fact, the underlying principle of EPSS. These test subjects used the support very little in preparation for an action or to become specifically better-informed. When learning with EPSS, there is probably a focused learning process of skills where solving the problem, as it is perceived at that moment, plays a major role.

Educational and Scientific Implications

The last four years we have been working on several cases in the field of performance support (Bastiaens, Nijhof & Abma 1995; Bastiaens, Nijhof, Streumer & Abma (1997). In the field of EPSS a lot has been stated but less have been proven. Our research projects show us that EPSS does not always fulfil the expectations. In general, the following may be said about training, working and the use of EPSS.

As far as training with EPSS is concerned, there are found to be disadvantages linked to concepts such as just-in-time learning and minimal training on-the-job, such as postponing the learning process and a loss of the overall picture.

As regards working, it becomes clear that an EPSS does not automatically produce an increase in productivity. The greatest advantage of computer support while working proves for the time being to be in the automation of tasks. The computer can easily take over simple, routine or boring tasks.

As far as the use of EPSS is concerned, it appears that test subjects set about their work in a variety of ways. In general, there is a tendency for very little use to be made of inbuilt support, however comprehensive or exhaustive the help function or the CBT may be. In addition, it appears that eliminating intervention or support from other people is not regarded as desirable by the users of EPSS. On the contrary, human intervention by colleagues, for example, is very much appreciated.

In our research we try to look more careful and fundamentally to these electronical environments.

References

Bastiaens, Th. J., Nijhof, W.J. & H.J. Abma (1995). The Effectiveness of an Electronic Performance Support System on Learning and Performance. In: Holton, E.F. (Eds.) Academy of Human Resource Development Conference Proceedings. Austin (TX), 13-1.

Bastiaens, Th. J., Nijhof, W.J., Streumer, J.N. & H.J. Abma (1997). Electronic Performance Support for Telephone Operators. In: Preskill & Dillworth, R.L. (Eds.). Human Resource Development in Transition. Defining the Cutting Edge. Washington: ISPI/AHRD.

Gery, G.J. (1989). Training vs. Performance Support: Inadequate Training is Now Insufficient. Performance Improvement Quarterly, No. 2, Vol. 3, 51-71.

Gery, G.J. (1992). Electronic Performance Support Systems. Boston: Weingarten Publications.

Raybould, B. (1990). Solving Human Performance Problems with Computers. A Case Study: Building Electronic Performance Support Systems. Performance & Instruction, Nov/Dec, 4-14.

Raybould, B. (1991). An EPSS Case Study: Prime Computer. Ariel PSS Corporation, 1-11.

Perceived Barriers To Learning Over The Internet

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This study explored differences in perceived barriers to learning over the Internet held by 764 individuals employed at 38 community colleges. Differences in perceived barriers were examined with respect to age, gender, career position, size of employing institution, knowledge of computers, knowledge of the World-Wide-Web, and prior experience with on-line courses. The findings hold implications for trainers, educators, and organizations interested in offering training modules and courses on-line over the Internet.

This research explores perceived barriers to learning over the Internet. Currently available on the graphical area of the Internet known as the World-Wide-Web are a variety of kindergarten through twelfth-grade courses and college degrees (Lord, 1995; Milone, 1997). Examples of such offerings include a four-year high school curriculum from the Department of Distance Education at the University of Nebraska (http://www.concord.org/proj-vhs.html), an Internet Academy for Home Schoolers at the Federal Way School District 210 (http://www.fwsd.wednet.edu/), and college degrees from the Open University (http://www.open.ac.uk/) and Western Governors University (http://www.westgov.org/smart/vu/vu.html). Accompanying the increase in on-line courses has come a growth in on-line clearinghouses such as the World Lecture Hall (http://wwwhost.cc.utexas.edu/world/instruction/index.html) and the Globewide Network Academy (http://www.gnacademy.org:8001/uu-gna/index.html). These web sites provide lists and/or searchable databases of on-line course offerings.

With instructors and students at different locations, on-line courses via the Internet can be considered a form of "distance instruction" (Dede, 1995; Kerka, 1996). A number of studies of on-line courses have generally found this form of instruction to be effective for highly motivated students (Hilz, 1990; Lyons, 1995; Moore & Thompson, 1990; Tissue et al.l, 1996). On-line courses have also been shown to be cost-effective (Crenshaw, 1997) and to foster social/professional communities (Schrum, 1993). As to the quality of on-line courses, Ridley (1995) found on-line courses at Christopher Newport University to be as rigorous or more rigorous than traditional courses. Students reported on-line courses to be "intensive" and "demanding." When compared to traditional courses, on-line courses had a significantly higher dropout rate. Furthermore, on-line courses tended to be more appealing to students with prior on-line learning experience.

Examples of traditional courses being offered electronically through various telecommunications mediums have been discussed by a number of writers (Romiszowski & de Haas, 1998; Schrum, 1992; Smith, 1989). The recent development of such on-line courses appears to be spurred by rapid advances in technology, the need for lifelong learning, and the growth of non-traditional students in the United States and elsewhere (Crossman, 1997; Romiszowski, 1997). In order to secure the education they desire, non-traditional students must often overcome a variety of barriers (Clabby, 1985; Golen, 1988; Mackenzie, 1994; Richter, 1984; Schmidt, 1997); many of these hindrances relate to concerns about time, distance, and financial matters (Schrum, 1995). On-line courses are viewed by some non-traditional students and educators as a potential solution to the barriers of time and distance (Schrum, 1995). With on-line courses, students are able learn at home or at the office, thus avoiding the time and expense associated with traveling to and from class.

With the rapid acceptance of the Internet as a viable and cost effective medium for delivering instruction, there is the possibility that barriers associated with learning over the Web may be overlooked, ignored, or minimized. It is possible that as on-line instructors overcome the traditional education barriers of time and distance, they will inadvertently create new barriers to education. While it is unclear at this time what these new barriers might be, some of the possibilities include access to the Internet, poor keyboarding skills, difficulty reading computer screens, lack of computer skills, lack of knowledge about

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the Internet/World-Wide-Web (Anderson, 1996; Reidelback, 1996), negative attitude towards the Internet (Maddux, 1996), costs (Freud, 1996), and differences in learning styles (Gibson, 1996; Hall, 1997). An understanding of these potential barriers is critical if educators/trainers are to provide a wide range of learners highly effective on-line instruction.

Research Questions

For the purpose of this investigation, three research questions were posed. They include:

1. What are some of the perceived barriers to taking courses on-line over the World-Wide-Web?
2. Is there a significant difference in perceived barriers with respect to age, gender, knowledge of computers, knowledge of the World-Wide-Web, and prior experience with on-line courses?
3. Is there a significant difference in perceived barriers with respect to career position and size of organization?

Methodology:

An Internet search was conducted to locate the universal resource locators (URL) of on-line faculty and staff e-mail directories for colleges listed in Peterson's 1997 Guide to Two Year Colleges. Thirty-eight colleges were randomly selected to serve as the sample group. A combined cover letter and 31-item questionnaire was electronically mailed to faculty and staff in the selected colleges. Respondents were also given instruction on how to return the questionnaire. Options included e-mail, fax, or the U.S. postal service. Fax and U.S. mail return options were offered to respondents desiring complete anonymity. Items on the questionnaire related to personal/occupational information, perceived knowledge of computers and the Internet, past experience with on-line courses, and perceived barriers to taking courses over the Internet.

Data from the questionnaires was entered into a statistical database from which descriptive and comparative statistics were generated. Descriptive statistics included frequency counts, percentages, and means scores for the various variables. Comparative statistics included the results Chi square and Annova tests. A series of Chi square tests were performed to test for significant differences in perceived barriers with respect to gender, geographical location, career position, and prior experience with on-line courses. Anova tests were used to test for significant differences in perceived barriers with respect to age, knowledge of computers, knowledge of the Internet/World-Wide-Web, and size of employing organization. The probability level for determining statistical significance was p = .05.

Results

Of the 1,146 surveys electronically delivered to employees at 38 community colleges, 764 were returned (66.666% return rate). Six hundred seventy-eight surveys (88.743%) were returned by e-mail, 63 (8.246%) by U.S. postal service, and 25 (3.272%) by fax. Respondents had a mean age of 45.228 years. Four hundred nineteen (54.842%) were female and 345 (45.157%) were male. Four hundred five (53.01%) were community college instructors, 201 (26.309%) were administrators, and the remaining 115 (15.052%) worked at various support positions. Thirty-seven (18.408%) administrators were high level administrators. Ninety-six (47.761%) were middle and 122 (60.697%) were lower level managers. Forty-three (5.628%) of the respondents had taken a course on-line and 15 (1.963%) had prior experience teaching courses over the Internet.

With respect to question one, What are some of the perceived barriers to taking courses on-line over the World-Wide-Web? the strongest perceived barriers appeared to be a preference for being with people over sitting at a computer, time to learn and do what is necessary to take a course on-line, and current knowledge of computers/the Internet. Table One shows mean ratings for the seven potential barriers examined in the study. Mean scores for access to computers (1.969) and access to the Internet (1.95) were nearly identical. The same was true for dislike for using computers (1.679) and an inability to learn with computers (1.674). Correlation coefficient for the two pairs were r=.875 and r=.725 respectively.

Other barriers noted by respondents included course availability, money, narrow bandwidth, lack of interest, lack of technical support, outdated computer equipment, lack of human/social contact, lack of human interaction, a belief that technology was not suited for their subject area, a feeling that on-line learning is boring, and not being comfortable with new methods/technologies.

As to questions two and three of the study (Is there a significant difference in perceived barriers with respect to age, gender, knowledge of computers, knowledge of the World-Wide-Web, and prior experience with on-line courses? and Is there a significant difference in perceived barriers with respect to career position and size of organization?), several differences were discerned. *Chi-Square* tests results revealed a significance difference with respect to career position (see Table Two). Administrators perceived Internet access to be a significantly smaller barrier than did instructors and other workers (i.e., office support staff, maintenance workers, and grounds keepers). Instructors also perceived Internet access to be a significantly smaller barrier than did other workers. No significant differences were found with respect to gender, geographical location, or prior experience with on-line courses.

Table 1. Mean Rating For Perceived Barriers
N=764

Variables	Mean	SD
My preference for being with people over sitting at a computer	2.952	1.529
My limited time to learn and do what is necessary to take a course on-line	2.614	1.437
My current knowledge of computers/the Internet	2.036	.051
My level of access to computer equipment	1.969	1.412
My level of access to the Internet	1.95	1.41
My dislike for using computers	1.679	1.232
My inability to learn with a computer	1.674	1.167

Table 2. Chi-Square Test For Perceived Barrier Differences
N=764

Variable	Chi-Square	DF	P
Gender	7.679	4	.1041
Geographical location	13.194	12	.3551
Career position	20.427	8	.0088
Prior experience with on-line courses	2.43	4	.6572

Results of the Anova tests used to test for significant differences in perceived barriers and age, knowledge of computers, knowledge of the Internet/World-Wide-Web, and size of employing organization are shown in Table Three. Follow-up T-Tests revealed significant differences in perceived barriers with respect to age. Persons in their 40's, 50's, and 60's rated dislike for computers and limited time to learn and do what is necessary to take a course on-line as significantly greater barriers than did individuals under 30 years of age. Follow-up T-Tests also revealed significant differences among each of the seven perceived barriers with respect to knowledge of computers (see Table Five). The greatest differences were in the areas of limited time to learn and do what is necessary to take a course on-line, current knowledge of computers, and dislike for computers. Similar differences occurred across all seven barriers with respect to knowledge of the Internet/WWW (see Table 5). One notable exception was that perceived Internet access barrier differences among the levels Internet/WWW knowledge appeared less frequently. Individuals employed at organizations with 10,000 to 14,999 students rated the barrier dislike for computers a significantly greater barrier than did persons working at institutions enrolling 1,000 to 4,999 students.

Conclusions

A number of conclusions can be drawn from the results of the study. First, it appeared that none of the potential barriers were perceived to be major obstacles to learning on-line. On a 5-point scale only three of the barriers had a mean rating of 2.5 or higher. They included a preference for being with people over sitting at a computer (mean = 2.95), limited time to learn and do what is necessary to participate in an course (mean = 2.614), and current knowledge of computers/the Internet (mean = 2.036). This is not altogether surprising since respondents in the study were all employed at institutions with posted e-mail directories on the Internet. Most respondents have sophisticated enough technical skills to take and return the survey instrument on-line. This may not be the case at other community colleges across the country. Secondly, one might conclude from low to moderate mean perceived barrier ratings, that if there are major barriers to learning on-line, they may have more to do with such things as the limited number of courses being offered on-line, limited resources to purchase up-to-date computers, narrow bandwidth, lack of interest, lack of technical support, and general discomfort with the Internet technologies than the seven barriers examined here. A number of these barriers have been noted by Anderson (1996) and Reidelback (1996).

A third conclusion that may be drawn from results of the study is that potential barriers represent greater obstacles to learning on-line for some persons than others. For example, a dislike for computers and the needed to learn and do what is necessary to take a course on-line are greater barriers for older individuals. Individuals over 30 years of age perceived such barriers as being significantly greater than did persons under 30. Dislike for computers also appears to be a greater barrier for persons working in larger organizations. Respondents employed at organizations with 10,000 to 14,999 students rated dislike for computers a significantly greater barrier than did persons employed at places enrolling 1,000 to 4,999 students. Gaining access to the Internet appears to be a greater barrier for individuals holding non-managerial jobs. Administrators in the study rated Internet access to be a significantly smaller barrier than did instructors and other workers.

Table 3. Annova Test For Perceived Barrier Differences
N=764

Variables	DF	Sum Squares	F Score	P
Age and dislike for computers barrier	4	13.25	2.41	.0479
Knowledge of computers and current knowledge of computers/Internet barrier	4	109.864	18.029	.0001
Knowledge of computers and access to computer equipment barrier.	4	43.581	6.089	.0001
Knowledge of computers and access to the Internet barrier.	4	34.395	4.815	.0008
Knowledge of computers and dislike for computers.	4	59.487	11.466	.0001
Knowledge of computers and preference for working with people barrier.	4	44.114	5.202	.0004
Knowledge of computers and inability to learn with computers barrier	4	36.574	7.791	.0001
Knowledge of computers and limited time barrier.	4	70.83	9.91	.0001
Knowledge of the Internet/WWW and knowledge of computers/Internet barrier.	4	100.325	16.13	.0001
Knowledge of the Internet/WWW and access to computer equipment barrier.	4	25.327	3.436	.0085
Knowledge of the Internet/WWW and access to the Internet barrier.	4	23.322	3.202	.0128
Knowledge of the Internet/WWW and dislike for computers.	4	28.716	5.298	.0003
Knowledge of the Internet/WWW and preference for working with people barrier.	4	47.206	5.571	.0002
Knowledge of the Internet/WWW and inability to learn with computers barrier	4	24.72	5.123	.0004
Knowledge of the Internet/WWW and limited time barrier	4	69.661	9.598	.0001
Size of employing institution and dislike for computers	4	15.854	2.897	0213

Table 4. Follow-Up T Tests For Knowledge Of Computers and Perceived Barrier Differences
N=764

Self-Rating On Knowledge of Internet/WWW Compared to Colleagues	Preference For Being With People Barrier	Limited Time To Learn Barrier	Current Knowledge of Computers Barrier	Access To Computer Equipment Barrier	Access To The Internet Barrier	Dislike For Computers Barrier	Inability To Learn With Computers Barrier
Much Less-Less							
Much Less-Same			*			*	
Much Less-Greater			*			*	
Much Less-Much Greater		*	*			*	
Less-Same		*	*	*		*	*
Less-Greater		*	*	*	*	*	*
Less-Much Greater	*	*	*	*	*	*	*
Same-Greater	*	*	*	*	*	*	
Same-Much Greater	*	*	*	*	*	*	*
Greater-Much Greater	*	*					

*Significant difference at .95%

Table 5. Follow-Up T Tests For Knowledge of Internet/WWW and Perceived Barrier Differences
N=764

Self-Rating On Knowledge of Internet/WWW Compared to Colleagues	Preference For Being With People Barrier	Limited Time To Learn Barrier	Current Knowledge of Computers Barrier	Access To Computer Equipment Barrier	Access To The Internet Barrier	Dislike For Computers Barrier	Inability To Learn With Computers Barrier
Much Less-Less							
Much Less-Same			*			*	
Much Less-Greater		*	*			*	
Much Less-Much Greater	*	*	*		*	*	*
Less-Same		*	*			*	
Less-Greater	*	*	*	*		*	*
Less-Much Greater	*	*	*	*	*	*	*
Same-Greater		*	*				
Same-Much Greater	*	*	*	*	*	*	*
Greater-Much Greater	*	*		*			*

*Significant difference at .95%

A fourth conclusion derived from the results is that knowledge of computers and the Internet widely affect how potential barriers to learning on-line are perceived. Perceived differences in all seven barriers were discerned with respect to knowledge of computers and the Internet. In general, individuals with greater knowledge of computers and the Internet tended to perceive each of the seven potential barriers to learning on-line as being significantly smaller than did persons with less computer and Internet knowledge. However, casual relationships between computer and Internet knowledge and potential barriers remain unclear. For example, does greater access to computer equipment and the Internet lead to greater computer and Internet knowledge? Does a preference for being with people cause individuals to avoid computers and thus limit their knowledge of computers and the Internet. Does a dislike for using computers result from a lack of computer knowledge and/or their inability to learn with computers. These questions and others offer fertile ground for future studies.

The fifth and final conclusion of the study is that a strong relationship exists between access to computers and access to the Internet and a dislike for using computers and an inability to learn with computers. Correlation coefficients for the two respective sets of variables were r=.875 and r=.725. All respondents in the study had some access to computers and the Internet. It is likely that some individuals had greater access to computers than others (e.g., administrators versus other workers). Persons having greater access to computers most likely had greater access to the Internet. Individuals who have had difficulties learning with computers probably have acquired a greater dislike for computers than individuals who have experienced few difficulties. Furthermore, persons with a greater dislike for computers may be more likely to have had more difficulties in learning with computers than individuals who enjoy computers. They may also prefer being with people as opposed to sitting at a computer and feel less conformable with computer related technologies.

Discussion

The findings of this study have implications for trainers and educators interested in offering training modules and courses on-line as well as for organizations desiring their employees to engage in on-line learning. Increasing the computer and Internet knowledge of individuals over 30 years of age may be one of the most productive actions that can be taken to lessen perceived barriers by potential on-line learners. This might be accomplished through a combination of classroom training and technology mentoring. To dispel some perceptions of on-line learning as being highly impersonal and non-interactive, the training might demonstrate desktop video conferencing and other highly interactive technologies (e.g., shockwave) that learners may not be aware of. The training should also provide examples of how on-line instructors make use of humor, various media, and close student-instructor communications to make the instruction interesting and highly personal. Since some respondents reported availability on on-line courses as a barrier, the training might also teach participants how to locate on-line courses in their fields.

As with traditional barriers to adult learning, time appears to be an obstacle to taking courses over the Internet. Next to a preference for being with people, having the time to learn and do what is necessary to take a course on-line was judged to be the second strongest barrier to learning on-line. For individuals who have not grown up with computers, persons over thirty years of age, taking a course on-line may require a rather substantial up-front investment in learning time. It is best that this need is recognized and openly discussed. Institutions may want to adjust employee work schedules to accommodate this one time critical learning. They may also want to explore various types of incentives to encourage employees to "find the time" to bring themselves up-to-date technologically.

Dislike for computers appears to be a much greater barrier at larger institutions that it is for small institutions. Individuals employed at organization with 10,000 to 14,999 students rated "dislike for computers" a significantly greater barrier than did persons employed at institutions enrolling 1,000 to 4,999 students. Perhaps larger institutions have a longer history in the use of computers. Computers systems at these institutions may be older, larger, more cumbersome, more subject to breakdowns, and less user friendly than small systems used at smaller institutions. Outdated computer equipment and a lack of technical support were among the additional barriers noted by respondents. This being the case, more user friendly computer technologies may need to be made available at these institutions to encourage employees to take courses and training modules on-line.

Data in the study was drawn from 764 employees at 38 community colleges with access to the Internet. It is unlikely that these respondents or their institutions are representative of people and organizations in the general population with limited access to computers and/or the Internet. Furthermore, because many community colleges offer a variety of technical programs and some courses on-line, one might expect the computer technology skills of their employees to be somewhat greater than the general population. This being the case, the seven potential barriers examined in the study may be perceived by persons in the general population as being greater obstacles than what is reported here.

Further research is needed to explore other potential barriers to taking courses on-line. Potential barriers deserving study include course availability, money, narrow bandwidth, lack of interest, lack of technical support, outdated computer equipment, lack of human/social contact, lack of interaction, a belief that technology is not suited to some fields, a belief that on-line learning is boring, and discomfort with on-line teaching/learning methods and technologies. Factors affecting individuals' computer and Internet knowledge as well as a dislike for computers are additional areas in need of systematic investigation.

References

Anderson, T. D., & Joerg, W. B. (1996). WWW to support classroom raining. Canadian Journal of Educational Communication, 25(1), 19-35.

Clabby, J. F., & Belz, E. J. (1985). Psychological barriers to learning: Approach using group treatment. Small Group Behavior, 16(4), 525-33.

The concord consortium: educational innovation through creative technologies. (July, 1997). Home page. Available: http://www.concord.org/proj-vhs.html.

Crenshaw, D. (1997). 'net training. (Internet-based training) (includes related articles on cost of internet-based courses, and on an internet-based training checklist) (Internet/Web/ service Information). InfoWorld, 19(9), 61-62.

Dede, C. (1995). The Transformation of Distance Education to Distributed Learning. http://harmon.cl.uh.edu/Intro.html.

The federal way school district. (1997). Home page. Available: http://www.fwsd.wednet.edu/.

Freud, R. (1996). Community college and the virtual community. Prinston Univ., Med-Career Fellowship Program.

Gibson, S. (1996). Is all coherence gone: The role of narrative in web design. Interpersonal Computing & Technology, 4(2) 7-26.

The globewide network academy. (1997). Home page. Available: http://www.gnacademy.org:8001/uu-gna/index.html.

Golen, S., & Burns, A. C. (1988). Programmatic research on communication barriers to learning. Journal of Business Communication, 25(2), 85-92.

Hall, Richard H. & Hickman, Lewis L. (1997). The effect of contiguity and complexity of web page displays on subjective ratings: The role of gender. American Educational Research Association, Chicago Ill.

Hiltz, R. S. (1990). Evaluating the virtual classroom. In L Harasim (Eds.), Online education: Perspectives on a new environment (pp. 133-184). New York: Praeger.

Kerka, Sandra. Distance learning, the internet, and the world wide web: Office of educational research and improvement (Ed), Washington, DC. Clearinghouse on adult, career, and vocational.

Lord, M. (1995). Getting a degree by e-mail: Online courses are exploring - both superb and the subpar. (1996 Career Guide). U.S. News & World Report, 119(17), 91-92.

Lyons, D. (1995). Good grades for on-line education, (new educational opportunities for IS profesionals), (includes related article on effectiveness of online education), (Industry trend or event). Computerworld, 29(45), 141.

MacKenzie, L. (1997). Light on learning: Method to overcome barriers to learning: People's Education No. 5. Second Revised Edition. University of the Western Cape, Bellville (South Africa). Centre for Adult and Continuing Education.

Maddux, C. D. (1996). The world wide web and the television generation. Computers in the Schools, 12 (1-2), 23-30.

Milone, M. N. (1997). Virtual learning get real: Technology information. Technology Learning, 17(5), 51.

Moore, M. G., & Thompson, M. M. (1990). The effects of distance learning: A summary of literature (Research Monograph No. American Center for the Study of Distance Education, The Pennsylvania State University.

The open university. (1996). Home page. Available: http://www.open.ac.uk/.

Petersons (1997). Peterson's guide to two-year colleges. (27th ed.) New Jersey: Author.

Reidelback, D. (1996). Web worries. Currents, 22(10), 42-44, 46, 48.

Richter, D. L., & Witten, C. H. (1984). Barriers to adult learning: Does anticipation match reality? Journal of College Student Personnel, 25(5), 465-67.

Ridley, D. R. et al. (1995). The 1995 assessment report on cnu online. Christopher Newport College VA.

Romiszowski, A. J. & Hass, J. A. (1989). Computer-mediated communication for instruction: Using e-mail as a seminar. Educational Technology, 29(10), 7-14.

Schmidt, S. D. (19). Understanding the culture of adults returning to higher education: Barriers to learning and preferred learning style. Department of Agriculture, Washington, D. C.

Schrum, L. (1992). Professional development in the information age: An online experience. Educational Technology, 32(12), 49-53.

Schrum, L. (1993). Social interaction through online writing. In R. Mason (Eds.). Computer conferencing: The last word (pp. 171-196). Victoria, B.C.: Beach Holme Publishers.

Smith, R. C. (1989). Spacetime physics: A college course team-taught on BITNET for academic credit. In B. Feinstein & B. Kurshan (Ed), Telecommunications in Education: Learners and the Global Village, (pp. 202-208). Jerusalem, Isreal: International Society for Technology in Education.

Western governors university. (1997). Home page. Available: http://www.westgov.org/smart/vu/vu.html.

The world lecture hall (1997, Sept. 9) Home page. Available: http://www.utexas.edu/world/lecture/index.html.

E-Mail Mentoring: Boundary Spanning for the Distance Learner

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Boundary spanning and mentoring have each been heavily researched in organizational studies. This study suggests that the mentor can serve as a boundary spanner for distance learners. A study was conducted of university graduate students to determine the impact of e-mail mentoring on their perceptions of connectedness to the organization. The results indicate that the mentoring process enabled the learners to more accurately interpret the system and span the "transactional distance."

This paper explores the relationship between e-mail mentoring and boundary spanning. Qualitative studies have shown the benefits of mentoring in business and education. Sheehy (1995) researched people in midlife who were deepening friendships and exploring the satisfaction of mentoring. Wolf (1993) found that a female mentor-female mentee relationship was necessary to help women break through the glass ceiling. She concluded that once a mentorship was established, the female mentees had someone to interact and collaborate with, and were likely to explore more challenges. Summers-Ewing (1994) linked mentoring with either career success (as measured by salary and number of promotions) or early career progress. She also discovered that proteges had higher self-confidence and less job stress.

Cohen (1995) suggests that one of the behavioral functions of mentoring is that of information sharing. For the trainee in a global organization or student at an off-campus site, reliance on technology rather than face-to-face communication makes the receiving and processing of information a unique problem. Moore (1973), in describing his theory of transactional distance, defined distance as something more than just a geographic separation between educator and learner. He suggests that there is also a distance of understanding and perception, often creating many *mis*understandings and *mis*perceptions which must be overcome for planned learning to occur. Distance learners are, by definition, autonomous learners; Moore's theory emphasizes, however, how lonely an autonomous learner can be without a link, or connection to the learning center.

The authors of this paper address the valuable role of the adult educator as boundary spanner and mentor to the distance learner. Daft and Weick (1984) noted the need for people to "interpret what they have done, define what they have learned, solve the problem of what they should do next" (p.284). Distance learners, in particular, need a guide to enable them to interpret their new information accurately. The findings in Tushman and Scanlan's (1981) study of corporate managers suggested that some organizational members serve as boundary spanners. Their study revealed that managers often communicate across boundaries, thus enabling them to obtain relevant information on one side and disseminate it on the other. Tushman and Scanlan add that when the impact of idiosyncratic language and local conceptual frameworks in one organizational division or department can block the distribution of information across specializations, the manager can transcend this barrier.

We suggest that adult educators can serve as information gatherers and interpreters for adult learners, and can transcend communication barriers as the managers did in Tushman and Scanlan's (1981) study. Trainers and organization development professionals can "literally wade into the ocean of events that surround the organization and actively make sense of them" (Daft and Weick, p. 286).

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We suggest further that mentoring, through the use of e-mail, is an appropriate and effective means to overcome the communication problems inherent in transactional distance.

Theoretical Framework

This paper is grounded in the theoretical arenas of organizational culture, systems theory, mentoring and boundary spanning. An organizational culture is "supported by a pattern of basic assumptions developed by its members over time, thought to be valid and taught to new members as the correct way to perceive, think and feel" (Schein, 1990, p. 111). From systems theory comes the premise that the organization, as a system, tends toward a kind of equilibrium and tries to reduce dissonance and bring assumptions and beliefs into alignment with each other (Schein, 1990; Lewin, 1952). However, just as a system contains sub-systems, the organizational culture often develops sub-cultures, which, in turn, create dissonance and disharmony. Each sub-culture develops its own communication network and, over time, evolves into a unique subset of norms, assumptions and behaviors (Powell, 1997). Huber (1996) and Tushman and Scanlan (1981) support this systemic view of sub-cultures by noting that divisions or departments within an organization often have unique semantics which serve as a framework for a unique set of collective beliefs. Dissonant collective beliefs between divisions can result in a breakdown in the organization's information sharing system.

Mentoring can be defined as a one-to-one relationship between mentor (guide) and mentee (protégé) which can help mentees develop their personal, educational, or career potentials (Hubschman, 1996). Cohen's theory of mentoring suggests there are several levels of mentoring, the first which conveys through active, empathetic listening a genuine understanding and acceptance of the mentees' feelings. Its purpose is to create a psychological climate of trust which allows mentees to honestly share and reflect upon their personal experiences (positive and negative) as adult learners. The second emphasis is on information, which directly requests detailed information from and offers specific suggestions to mentees about their current plans and progress. A third mentoring focus is to assist mentees in considering alternative views and options while reaching their own decisions.

Another level is confrontation, where the mentor challenges the mentee to evaluate the need and capacity to change (Cohen, 1995). Mentors, argues Cohen, are essential to learners who have not obtained "sufficient informational reference points" (p.50), because they can help to interpret information. Their role allows them to provide feedback to determine if the learners are "anchored in realistic appraisal of the actual situation"(p.59).

The mentoring function appears similar to the boundary spanner, who must be able to understand the languages and conceptual frameworks of individuals outside of the division or department, in order to communicate effectively on both sides of the communication boundary. For the adult learner, the mentor who serves as boundary spanner is a link to the organization's resources and support system.

Research Questions

1. How does the use of e-mail in distance learning impact the learner's perception of the organization?
2. What effect does the e-mail mentor have on the learner's understanding of the organization's culture?

Methodology

This paper focuses on the findings of a study which was conducted at a large state university in Florida. The participants included 99 adult learners: sixteen males and 83 females from four graduate level research classes who were randomly assigned to mentored and neutral groups (Hubschman, 1996).

Each group was informed that, as part of the research study, they would be trained on the use of electronic mail (e-mail). It was stressed that the use of e-mail was voluntary, and would not affect the overall evaluation of the individual.

The researcher obtained mainframe accounts so that learners could send and receive e-mail immediately in the computer lab. A congratulatory letter was sent to all the first night. When the researcher demonstrated the fundamentals of logging onto the mainframe and receiving, replying, and composing e-mail by showing transparencies of actual screens and by giving out handouts of the screens for reference. That same night, learners were taken to the computer lab, where they practiced receiving messages from the instructor, replying to the instructor, and composing email messages to the instructor and peers. The researcher was available in the computer lab the next two weeks after each class, in case learners wanted extra instruction on using e-mail. The learners were also given instructions on how to access the mainframe computer from off-site, in case they wanted to use e-mail from their home or workplace.

Learners were randomly assigned to one of two groups. Those in the mentoring e-mail group received messages that attempted to establish a one-to-one relationship, give individualized advice, or challenge or motivate the mentee. Those in the neutral e-mail group received general information in an impersonal, generalized way (Hubschman, 1996). Those in the mentoring e-mail group were asked questions about their interests and goals, in order to convey more open communication between mentor and mentee. Each group was sent at least five researcher-initiated messages.

All e-mail received by the researcher was saved to disk for a qualitative analysis of themes, and coded quantitatively, as a "reply" (to previous mail) and "compose" (a new message).

Results

Many who replied to the e-mail post from the researcher wrote about completely different subjects than the titled message. Others responded to the titled message, and then proceeded to write about different concerns. A few learners wrote that it was easier to reply on this e-mail system than to compose a new e-mail message. Two t-tests were performed: one was to check for a significant difference between mentored and neutral groups in the number of responses sent to the researcher (Table 1), and the other was to check for a significant difference in the number of learner-initiated e-mail messages (Table 2). The mean of 6.89 responses from the mentored group, which consisted of 28 learners, was significantly different from the mean of 3.09 responses from the neutral group., which consisted of 22 learners. The mean of 3.11 composed messages from the mentored group, while greater than the composed messages mean of 1.77 from the neutral group, was not significantly different. This may have been due to the fact that some learners "replied" with new information rather than "composed" a new message.

Table 1

T-test of Total Responses by Responding Treatment Groups

Variable	N	M	SD	t-value	sig.
TOTAL RESPONSES					
Mentored	28	6.89	5.14	3.05	.004*
Neutral	22	3.09	3.13		

- $p < .05$

Table 2

T-test of Learner-Initiated Messages by Responding Treatment Groups

Variable	N	M	SD	t-value	sig.
TOTAL RESPONSES					
Mentored	28	3.11	3.14	1.65	.104
Neutral	22	1.77	2.37		

Mentored learners corresponded twice as much as did neutral learners, allowing them the opportunity to give and receive feedback on a number of academic and personal issues and to explore alternative views of organizational, departmental and academic concerns. The trust implicit in the mentoring relationship clearly encouraged a more frequent and deeper relationship. Learners who mentioned this deeper relationship in the qualitative component of the study described their feelings of "connectedness" to the course, the instructor and the institution. These findings suggest to us that mentors, in their role as boundary spanners, can enhance the confidence and self-esteem of the learner through serving as representatives of the system and thus enabling the learner to feel acknowledged and recognized by the system.

Implications

Although this study was conducted in a university setting, the mentoring relationship and boundary spanning studies were initiated and are grounded in the industrial workplace. With the advent of globalization, trainees are instructed through satellite and software. With the influx of telecommuting, employees who have replaced the traditional workplace with a home office, struggle with feelings of alienation and isolation from their organization's culture. This study suggests a new and vital role for the trainer, career development or organization development specialist: that of boundary spanner, who can, through the mentoring relationship, interpret the organizational climate for the distance employee.

References

Cohen, N. H. (1995). *Mentoring adult learners: A guide for educators and trainers.* Malabar, FL: Krieger Publishing Company.

Daft, R.L and Weick, K.E. (1984). Toward a model of organizations as interpretation systems. *Academy of Management Review*, 9(2), 284-295.

Huber, G. P. (1991). Organizational learning: The contributing processes and the literature. In M. D. Cohen and L. S. Sproull (Eds.) *Organizational Learning* (pp. 124-152). London: Sage.

Hubschman, B. (1996). The effect of mentoring electronic mail on student achievement and attitudes in a graduate course in educational research. (Doctoral dissertation, Florida International University, 1996). *Dissertation Abstracts International, 57-08A*, A3417. UMI order #9700485.

Lewin, K. (1951). *Field theory in social science*. New York: Harper and Row.

Moore, M. G., (1973). Towards a theory of independent learning and teaching. *Journal of Higher Education, 44* (9), 661-679.

Powell, T. (1997). *Impact of organizational sub-cultures on information processing: A manufacturing company's dilemma.* Atlanta, GA: Paper presented at Academy of Human Resource Development, February 27 – March 2, 1997.

Schein, E. H. (1990). Organizational culture. *American Psychologist, 34* (2), 109-119.

Sheehy, G. (1995). *New passages: Mapping your life across time.* New York: Random House.

Summers-Ewing, D. (1994). *Mentoring: A vital ingredient for career success.* Los Angeles, CA: Paper presented at American Psychological Association, August 12-16, 1994. (ERIC Document Reproduction Service No. ED 378 519).

Tushman, M. L., & Scanlan, T. J. (1981). Boundary spanning individuals: Their role in information transfer and their antecedents. *Academy of Management Journal, 24* (2), 289-305.

Wolf, M. A. (1993). Mentoring middle-aged women in the classroom. *Adult Learning, 4(5)*, 8-9, 22.

An Organizing Scheme for the Uses of Software Technology in HRD

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This review explores both research and popular literature for evidence of a previously published model, taxonomy or organizing scheme for computer software technology in HRD. It postulates that such a mechanism would be useful for helping both practitioners and researchers make informed decisions concerning computer technology. Since, no such model, taxonomy or organizing scheme was found during the literature search, the paper proposes an organizing scheme based on the ADDIE model of instructional development.

This literature review has several goals. First, to determine if a model, taxonomy or organizing scheme for computer software in HRD exists. Software technology is defined as computer software running on any level of computer hardware; mainframe, mini-computer or personal computer (PC). Discussion of the hardware used to run the various kinds of software is outside of the scope of this paper. Second, to identify the purpose and type of various software technologies used in accomplishing human resource development tasks and managing the human resource development process within organizations. The final goal of the paper is to propose an organizing scheme that classifies software technology according to its purpose and uses in HRD using the Analysis, Design, Development, Implementation, Evaluation process derived from instructional systems development (ISD) (HUMMRO, 1979) as the macro level classification mechanism.

Two trends converge to make this paper a timely contribution to HRD. The first trend is the call by Swanson (1995) and others for greater attention to developing a theoretical base for HRD and for aligning the actions of practitioners to improve organizational performance with that theoretical base. Second, as Arnold (1996) succinctly expressed it, the deployment and use of information technology (IT) within organizations continues unabated. At the intersection of these two trends stands the HRD practitioner and the HRD researcher. The practitioner wants tools and information, which will help him apply his expertise to the problems associated with increased technology introduction and use. The researcher needs taxonomic classifications as the first step in developing conceptual structures that can evolve into the theoretical base called for by Swanson.

Much of the research conducted over the past 3 decades has concentrated on the efficiency of computer-based training and associated learning delivery technologies. The time reductions and cost efficiencies of computer-based training (CBT) dominate the discussion when talking or writing about software technology in HRD. The new technologies refer to computer-based training (CBT) and computer assisted-instruction (CAI) in various forms. These include hypermedia and interactive multi-media (Ambron and Hooper, 1990; Fritz, 1992), distance learning, (Spikes, 1990; Thach and others 1993; Verduin and Clark, 1991), and interactive videodiscs, (Russ-Eft, 1994) as well as performance technology. This limited view obstructs the efforts of practitioners in making sense of the vast array of software choices and of researchers in building the structured and cohesive models necessary for understanding the phenomena.

A software technology organizing scheme addresses these concerns by expanding the practitioners' view from a focus on training to looking at performance improvement through the lens of a more comprehensive HRD model. It also provides researchers with a common vocabulary and set of definitions with which to begin the empirical testing necessary to theory development. As Finn (1953) wrote, "*Without a theory that produces hypotheses for research, there can be no expanding knowledge and technique. And without a constant attempt to assess practice so that the theoretical implications can be teased out, there can be no assurance that we will ever have a theory or that our practice will make sense. (pg. 6)*"

Frankfort-Nachmias and Nachmias (1992) list four types of theory that can be constructed:

1. Ad hoc classification systems which are arbitrary divisions into categories
2. Taxonomies which are categories based on empirical observation
3. Conceptual frameworks which are broad structures specifying relationships
4. Theoretical systems which combine taxonomies and conceptual frameworks.

This paper clearly fits the "Ad hoc classification system" description. It is a first step at creating the dialogue necessary for further theory development of software uses in HRD leading to

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a true taxonomy. Krathwohl, Bloom and Masia (1964) describe a true taxonomy as, "*a set of classifications that are ordered and arranged on the basis of a single principle or on the basis of a consistent set of principles. Such a true taxonomy may be tested by determining whether it is in agreement with empirical evidence and whether the way in which the classifications are ordered corresponds to a real order among the relevant phenomena. The taxonomy must be consistent with sound theoretical views available in the field. Where it is inconsistent, a way should be developed of demonstrating or determining which alternative is the most adequate one. Finally, a true taxonomy should be of value in pointing to phenomena yet to be discovered.*" This broad purpose of developing an ad hoc classification scheme leads to the following questions that framed the literature search.

- Does a model, taxonomy or organizing scheme for computer software technology in HRD currently exist?
- How are various software technologies used in accomplishing human resource development tasks and managing the human resource development process within organizations?
- What framework will best serve researchers in identifying the underlying concepts and constructs for the use of technology in the entire HRD (ADDIE-M) process?

Literature Review

The broad nature of this analysis prompts inclusion of nonresearch-based information drawn from practitioner publications and technology supplier literature, in addition to conceptual and case-based research literature. More than 120 journal articles, white papers, catalogs and company brochures were examined during the course of the study. In keeping with the primary aim of the study to identify and then provide a macro classification for the various technologies, no attempt was made to pursue any of the various categories in depth.

An initial literature search was conducted on the key words: performance technology; human performance technology; human resource development technology; human resource development software; and instructional technology, in an effort to determine if there was an existing classification scheme or taxonomy. The reference abstracts produced by this search were skimmed looking for discussion of models, taxonomies and organizing schemes. The following ten publications were reviewed: *Human Resource Development Quarterly, Training Magazine, Training and Development Journal, Performance Improvement, Performance Improvement Quarterly, Educational Technology Research and Development, Journal of Computer-Based Instruction and Journal of Educational Computing Research, Inside Technology Training and CBT Solutions.*

Once it was determined that no such scheme existed, articles containing the key words, software, information technology, and future of HRD were examined and an initial outline of possible categories was formed. This process continued iteratively, with expansions of the search into the literature of education, information technology (computer science), psychology, organizational development and career development. As the search of each discipline's literature led more deeply into in-depth discussion of the particular technologies rather than simply defining and classifying them, the search was shifted to another discipline.

After completion of a relatively well-developed categorization of the various types of software using the HRD process of *Analyze, Design, Develop, Implement and* Evaluate (Swanson, 1994) and establishing as yet unnamed subcategories the literature search was expanded to company brochures and industry white papers. This part of the literature search produced more concrete descriptions of the functionality of the various products and to find products that appeared to fit the categorization thus far. While it can be argued that industry white papers and company brochures are not "research", the speed of development, introduction and adoption of these software tools often outstrips the research community's ability to identify, categorize and assess their effectiveness. The examination of product literature and company white papers proved particularly valuable in completing the organizing scheme, since much of the research based in literature has concentrated on the Development and Implementation phases using computer-based training/instruction. The result of this final round of classifying and labeling was the organizing scheme presented next.

Results and Conclusions

The literature search found no model, taxonomy or organizing scheme which was based on a systematic HRD process and which sought to integrate the various types of software technology used in career development, organizational development and training. Consequently, the HRD Software Technology Organizing Scheme depicted in Diagram 1 was developed. The brace map, which is used for representing part-whole and part-subpart relationships, was selected as the mechanism to provide an overview of the concepts is depicted in *Figure 1*.

There were three levels used in the initial classification, ***Stage***, ***Purpose*** and ***Type***. Shown next are the definitions of each level in a hierarchy representing their level in the organizing scheme.

Stage is a bounded component element of the systematic human resource development process represented by the acronym ADDIE-M with Management depicted as an overarching concern throughout the process.

Purpose is the primary set of tasks or processes in HRD that the software assists the user to perform. Purpose is a gross distinction, since many programs could fit into multiple categories depending on where the arbitrary lines are drawn.

Type is a specific task, set of tasks or process in HRD that the software assists the user to perform.

Using this framework, the literature and example products were analyzed for logical groupings. For example, from the ***Analysis Stage***, *Learning Assessment* (a ***Purpose***) software enables or enhances the performance of tasks related to the measurement and assessment of knowledge, skills, abilities or attitudes of individual employees or groups of employees. Any software having these characteristics as its primary function would be grouped into that category. ***Type*** provided a greater degree of specificity for accomplishing HRD tasks or executing processes. For example, *Needs Assessment* software helps collect and analyze data to accurately identify the gaps between actual and desired performance at the thee levels of organizations, individual, process and organization (Swanson, 1994). **Table 1** shows ***Stage*** and ***Purpose***, including definition of each category within ***Purpose***.

Contribution to New Knowledge in HRD

Taxonomies, organizing schemes and frameworks are used to help both researchers and practitioners "make sense" of and make decisions about things within their field. A review of relevant literature failed to produce the kind of organizing scheme proposed here. Accordingly, this paper serves to initiate conversation about how software technology impacts HRD and about how we can begin organizing the current information and data, as well as beginning the search for new data.

Because this paper presents ideas not previously organized in this way, it raises more questions than it answers.

- Is the ADDIE-M process an appropriate model for the macro level of the framework or would another process or model be better?
- Which of the classification mechanisms would be most appropriate for software technology in HRD?
    - Teleologic based on a shared purpose (used in the proposed scheme)
    - Phylogenic based on a common root or origin
    - Phenetic based on observable similarities or differences
- What is the dividing line between Stage and Purpose and Type?
- How do we classify software that apparently fits in many or all of the classifications?

The next step in continuing research on this topic would be to establish a Delphi panel to more stringently examine the definitions and propose relationships between Stage and Purpose and Purpose and Type to create a true taxonomy.

Figure 1

Software Technology in Human Resource Development

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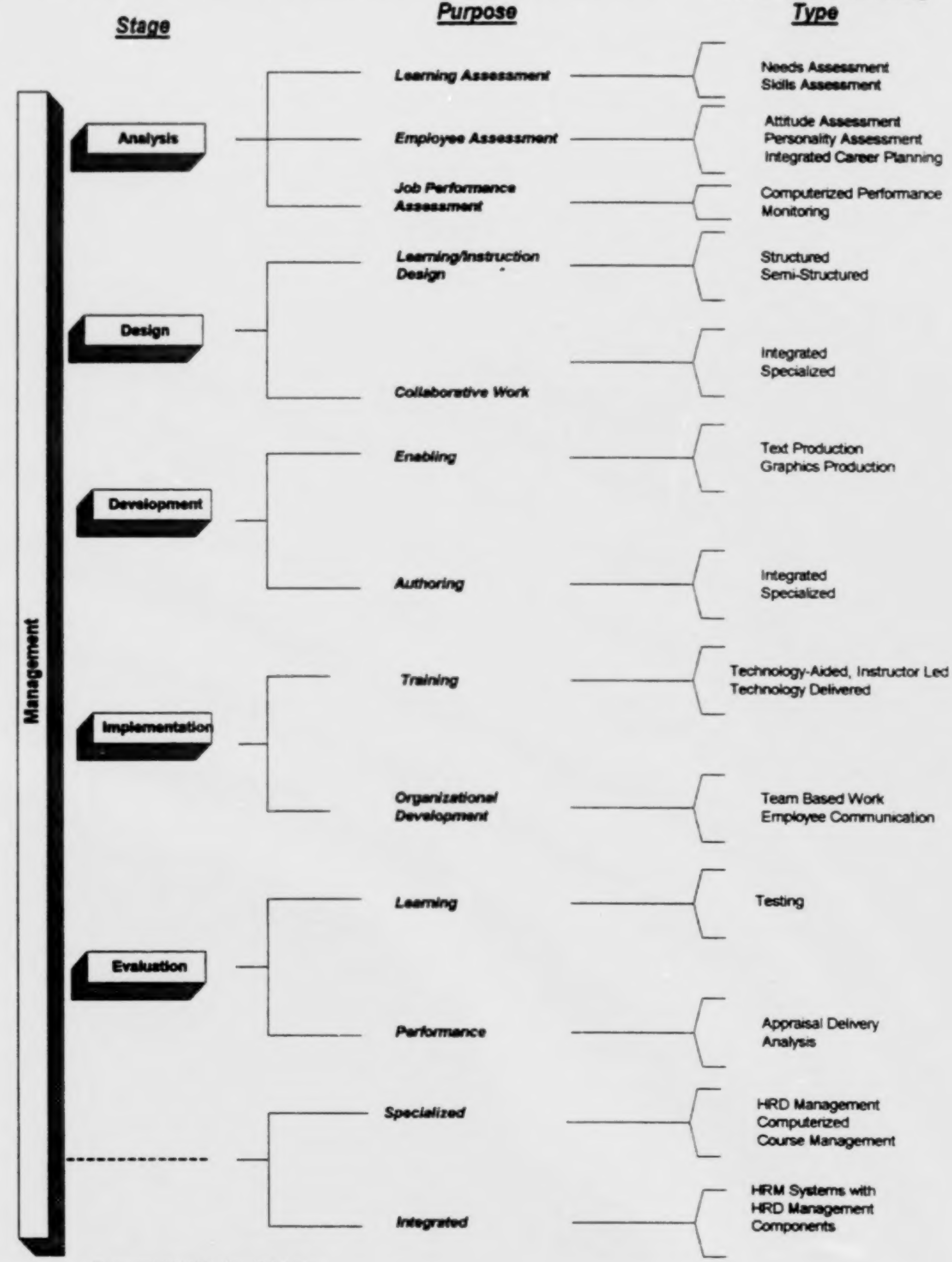
Stage
Purpose
Type
Management
Analysis
Learning Assessment
Needs Assessment
Skills Assessment
Employee Assessment
Attitude Assessment
Personality Assessment
Integrated Career Planning
Job Performance Assessment
Computerized Performance Monitoring
Design
Learning/Instruction Design
Structured
Semi-Structured
Collaborative Work
Integrated
Specialized
Development
Enabling
Text Production
Graphics Production
Authoring
Integrated
Specialized
Implementation
Training
Technology-Aided, Instructor Led
Technology Delivered
Organizational Development
Team Based Work
Employee Communication
Evaluation
Learning
Testing
Performance
Appraisal Delivery
Analysis
Specialized
HRD Management
Computerized
Course Management
Integrated
HRM Systems with
HRD Management
Components

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Table 1

Stage	Purpose
Analysis	*Learning Assessment* Contains two subcategories of technology, needs assessment and skills assessment. Learning assessment measures knowledge and skills levels of employees and compiles them to facilitate diagnosis of organizational performance problems and desired versus actual knowledge, skills, and abilities measured against some pre-determined standard.
	Employee Assessment Technology to test and measure the employees attitudes, personality, learning style and assist the employee in developing a career plan with their goals aligned with the mission of the organization
	Job Performance Assessment Contains two subcategories of technology, computerized performance monitoring systems and human resource information systems. Tools in this category measure compliance with pre-determined standards while completing the tasks specified in the employee's job.
Design	*Learning/Instruction Design* Technology in this category provides the user with help in all phases of the instructional design process, except actual media production and presentation. Divided into two types, structured and unstructured with structured representing the more traditional ISD approach to learning design and unstructured representing the emerging hypermedia/learner controlled non-design of information presentation.
	Collaborative Work Forms the very essence of the use of technology, changing the not only the work itself, but our perception of what work is and how it is best accomplished. Collaborative work technology is divided into two sub-types, integrated and specialized, both of which exhibit the primary characteristics of group work in the electronic age, communication, collaboration and coordination, but differ significantly enough that they should be examined separately.
Development	*Enabling* Standard technologies which enable the creation of HRD interventions fall into two categories, text production and graphics production. Because these products are so familiar to even the most technology phobic, limited time and space will be devoted to them in this study. Word processing and presentation programs comprise this category.
	Authoring Authoring systems are computer software packages which allow non-programmers to create (program) sophisticated applications which present information, ask questions and judge answers, branch in response to either user control or point in the program and capture data about the user. They can be further subdivided into two broad categories, integrated and specialized.
Implementation	*Training* Encompasses the most widely understood and commercially prevalent implementations of technology in HRD. This type divides into three sub-types, technology-aided, instructor led and technology-delivered.
	Organizational Development Implementation of technology in HRD at the organization level subdivides into team-based work and employee communication. Team based work technology assists individuals and groups in the coordination of complex tasks involving a rich mixture of delegation, sequential signoffs. Technology assisted employee communication transcends time and distance, without the requirement for physical presence to accomplish the designated tasks and brings the full spectrum of multimedia to bear in facilitating communication.
Evaluation	*Learning* Definitions and categorization within the domain of learning evaluation remain elusive. Shifting emphasis from content based instruction to individualized self-directed learning and building competency has produced confusion and contention causing a lag in development of specific, identifiable technology solutions in this area.
	Performance Performance evaluation technology in HRD subdivides into appraisal delivery and assistance and data analysis on individuals, groups and the enterprise itself.
Management	*Specialized* Software enables administration of the HRD specific tasks and processes. It is subdivided into two types, HRD Management and Computerized Course Management
	Integrated Software administers and controls the entire human resource function, such as hiring, benefits and compensation and includes, but includes a module which performs essentially the same functions as specialized HRD management software.

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Table 2

Purpose	*Type*
Learning Assessment	*Needs Assessment* software has as its core function, the accurate identification of gaps between the actual and desired performance at Swanson's (1994) three levels, organizational, process and individual. An example developed at San Diego State University is Needs Assessment Naturally, an electronic performance support tool that helps education and training professionals assess needs and generate integrated strategies.
	Skills Assessment software has as its core function, the accurate identification of an individual's capability to perform specific tasks or collections of tasks (job). An example developed by VFX Technologies, Inc, is Endeavor, which tests the user's skills in Novell and Microsoft networking products.
Employee Assessment	*Attitude Assessment* software measures an individual's relatively permanent way of feeling, thinking or behaving towards something or somebody. An example developed by Hilson Research, Inc. is Career Satisfaction Index, which measures satisfaction with career progress, supervisors and on the job stress.
	Personality Assessment software gathers and analyzes data for identifying individual personality differences and interpersonal styles. An example developed by Myers-Briggs is the computerized version of the Myers-Briggs Type Indicator instrument.
	Integrated Career Planning software assesses individuals based on competencies identified by supervisors and managers as being important to present and future job performance. Once the "state of competency" has been identified, the employee is guided through a development plan to achieve the desired competencies. An example developed by Conceptual Systems, Inc. is Assessing Strategic Competencies.
Job Performance Assessment	*Computerized Performance Monitoring* utilizes computer software, hardware and peripherals to measure, record, store sort and compile data on work-related activities. (Schleifen, Shell, 1992). An example is call-routing and monitoring software used by many large telephone based customer service operations, such as SABRE, the reservation subsidiary of American Airlines.
Learning/Instruction Design	*Structured* software generally follows the 9 step Instructional Systems Design (ISD) model popularized by Dick and Carey (1991). An example developed by Allen Communications is Designer's Edge, a performance support tool that walks designers through the process, capturing the required information in each phase.
	Semi-Structured software incorporates the latest advances in cognitive psychology and focuses more on the design aspects of computer-mediated instruction. An example developed at Utah State University is IDXelerator, which facilitates the development of instruction-centered courseware based on the latest theories in instructional design.
Collaborative Work	*Integrated* software provides a full range of tools and capabilities to allow groups of people to work in either synchronous or asynchronous environments accomplishing tasks and executing processes via computers. An example developed by IBM is Lotus Notes, which supports document sharing, collaborative editing, email, and group calendaring and scheduling.
	Specialized software provides a limited range of tools and capabilities to allow groups of people to work in either synchronous or asynchronous environments accomplishing specific tasks or executing a single process via computers. An example developed by Corel is Envoy, a document-publishing viewer that permits users to view and annotate documents without having the software that originally produced the document.
Enabling	*Text Production* software serves primarily to produce documents which communicate through the use of text and occasional graphics. An example developed by Microsoft is Word 7.0. Presentation Production software serves primarily to produce documents which communicate through the use of graphics and occasional text. An example developed by Microsoft is Power Point.
Authoring	*Integrated* authoring software enables nonprogrammers to create multimedia computer based instruction. An example developed by Macromedia Corporation is Authorware. Specialized authoring software assists in the creation and development of some component of the multimedia computer based instruction. There are packages in this category for graphics production and manipulation, sound, video, storyboarding and a host of other activities related to the production of multimedia computer-delivered training. An example developed by Adobe Systems, Inc. is Illustrator, a graphics package.

Training	*Technology Aided, Instructor-Led* software transforms the traditional methods of instructional information presentation, such as books, blackboards and video by allowing the alteration and updating of the information and examples in real time. An example would be the use of Microsoft Powerpoint to illustrate the effects of changes in the mean and standard deviation on the normal curve.
	Technology Delivered involves use of computer technology to present instructional transactions in any of Merrill's (1996) formats, text, demonstrate, compare, converse, explore.
Organizational Development	*Team Based Work* software enables accomplishment of a set of tasks or execution of a process by more than one individual. Software that supports such work is often called Groupware or Collaboration Software. An example developed by Novell Corporation is Groupwise, which supports document sharing, collaborative editing, email, and group calendaring and scheduling.
	Employee Communication software facilitates the electronic interchange of messages, files, documents and media objects, such as sound. An example developed by Qualcomm, Inc. is Eudora, a stand-alone package for creating, reading, sorting and storing email.
Learning	*Testing* software assists in the creation, presentation, feedback, answer collection and reporting of results on test questions and test files (group of questions) used to measure knowledge, skills or attitudes. An example developed by Question Mark, Inc. is QuestionMark Interactive.
Performance	*Appraisal Delivery* software provides a mechanism for capturing the information generated in the dialogue between manager and worker about work goals and performance. An example developed by Compstar, Inc. is Appraiser Plus.
	Data Collection software captures stores and sorts data relative to individual, process and organizational performance. An example developed by Microsoft Corporation is Access database software. Since this is a fundamental reason for the use of computers, this category of software has both a wide range and depth of products.
	Data Analysis software supports the organization, description and analysis of information collected about individuals, processes and the organization. An example for two different kinds of data would be SAS for analyzing quantitative (mainly numerical) information and NuDIST for analyzing qualitative (words) data.
Specialized	*HRD Management* software enables administration of the HRD function in such tasks as, tracking activities, scheduling courses, determining costs. An example developed by Gyrus Systems is Training Wizard.
	Computerized Course Management software controls and captures data about the process of computer-based training, including scheduling modules and courses and monitoring student progress. An example developed by Allen Communication is Manager's Edge.
Integrated	*HRM Systems with HRD Management Components* software administers and controls the entire human resource function, such as hiring, benefits and compensation and includes a module which performs essentially the same functions as specialized HRD management software. An example developed by Spectrum Corporation is HRVantage.

References

Ambron, S. & Hooper, K. (eds.). (1990). *Learning with interactive multimedia: Developing and using multimedia tools in education.* Redmond, WA: Microsoft.

Arnold, D. (1996). Role of HRD in the Successful Implementation of Information Systems. *Human Resource Development Quarterly,* Vol. 7(3), pg. 271-278.

Dick, W. & Carey, L. (1990). *The Systematic Design of Instruction, Third Edition.* Glenview, IL: Scott, Foresman and Company.

Edelman, F. (1981), Managers, computer systems and productivity. *MIS Quarterly, 5(3),1-17.*

Finn, J. D. (1953) Professionalizing the audio-visual field. *AV Communications Review,* 1(1), 6-17.

Frankfort-Nachmias, & Nachmias. (1992). *Research Methods in the Social Sciences (4th edition).* New York, NY: St. Martin's Press.

Fritz, M. (1992),. But is it training? *CBT Directions,* 176 (1), 101-108.

Human Resources Research Organization (1979) *An Annotated Bibliography for Instructional Systems Development.* US Army Institute for the Behavioral and Social Sciences, Alexandria, VA.

Krathwohl, D., Bloom, B., & Masia, B. (eds.) (1964). *Taxonomy of educational objectives: The classification of educational goals. Handbook III. Affective Domain.* New York, NY: Longman.

Merrill, D. (1994). *Instructional Design Theory, Chapter 16, Prescriptions for an Authoring System, pg. 332.* Educational Technology Publications, Inc., Englewood Cliffs, NJ.

Russ-Eft, D. (1994). CBT, CAI, EPSS and Déjà vu. *Human Resource Development Quarterly, 5 (3),* pg. *207-211.*

Schleifer,L. & Shell, R. (1992). A Review and Reappraisal of Electronic Performance Monitoring, Performance Standards and Stress Allowances. *Applied Ergonomics 23: 49-53.*

Spikes,W. (1990). *Training in the twenty-first century: Where do we go from here?* Paper presented at the American Association for Adult and Continuing Education Conference. Salt Lake City, UT.

Sviokla, J. (1996). Knowledge Workers and Radically New Technology. *Sloan Management Review, Summer, pg 25-39*

Swanson, R. A. (1995). Human Resource Development: Performance is the key. *Human Resource Development Quarterly,* 6, (2), pg. 207-213.

Thach, L., Telg, R., Mouzes, M., et al. (1993, April). *Meeting customer needs for distance learning information.* Paper presented at National Research Conference on Human Resource Development, Texas A&M University, College Station, TX.

Verduin, J., R. Jr., & Clark, , T. (1991). *Distance Education. The foundations of effective practice.* San Franciso, CA. Jossey-Bass.

Action imperatives that impact knowledge performance and financial performance in the Learning Organization: An exploratory model

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The purpose of this study was to understand the ways in which the characteristics of learning organizations and company characteristics themselves impact knowledge and financial performance in family-run firms. This study provides evidence regarding the impact of the seven dimensions of a learning organization on these two performance outcomes. An exploratory model suggests that knowledge and financial performance can be explained by selected company characteristics and two of the seven dimension of the learning organization.

There are three factors that are forcing all businesses to change. First, according to futurists, we have entered the knowledge era and our economy is the knowledge economy (Marquardt, 1994). A second major factor influencing change in organizations is the increase of global competition (Marquardt, 1994; Senge, 1990; Watkins and Marsick, 1993). Finally, the shift to Total Quality Management (TQM) is a third factor that is influencing the need to adapt to change (McLagan, 1989; Watkins and Marsick, 1993).

The learning organization is one method used to help a business successfully adapt to change. Peter Senge in his popular book The Fifth Discipline (1990) says that "The most successful corporations of the 1990's will be something called a learning organization. The ability to learn faster than your competitors... may be the only sustainable competitive advantage" (p. 4). Learning faster develops knowledge according to Marquardt (1994) who says "The world of business has now entered the knowledge era, where knowledge is power, and learning rapidly and competently is seen as the preeminent strategy for global success (p. 11). Nadler and Nadler (1991) agree when they say that "An organization that wants to be prepared to move with new ideas and trends needs a work force that is ready to learn anything new that comes along (p. 76).

The conceptual framework for this study centers around Watkins and Marsick's (1993) framework for a learning organization. Learning takes place at four interdependent levels in an organization - individual level, team or group level, organizational level, and between the organization and the society it operates within. This learning changes the organization. Transformational learning helps organizations understand and overcome the changes impacting them. This learning can also lead to better knowledge performance and financial performance.

There are six action imperatives, all synergistic, through which the learning organization is designed (Watkins and Marsick, 1993, p. 11). A seventh was added in a later work (Watkins and Marsick, 1996). These are:

- Create continuous learning opportunities
- Promote inquiry and dialogue
- Encourage collaboration and team learning

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- Establish systems to capture and share learning
- Empower people toward a collective vision
- Connect the organization to its environment
- Provide strategic leadership for learning (1996)

If an organization is to become a learning organization, these seven dimensions should be well represented in the culture of the organization. In addition, Watkins and Marsick (1996) developed two outcome scales-one measuring knowledge performance and the other measuring financial performance.

The context of this study is family businesses. Family businesses have the same pressures for change as professionally managed firms. They have the additional pressures of the family system impacting the business system. It is even more important that these family-run firms develop the ability to change. They, too, can benefit from developing as learning organizations. However, there may be characteristics of family businesses that prevent them from becoming learning organizations.

A thorough search of the literature revealed little empirical evidence verifying the relationship between the seven dimensions of the learning organization as defined by Watkins and Marsick (1993,1996) and knowledge performance and financial performance. Additionally, there is little research linking the learning organization and family businesses.

Research questions

The purpose of this study was to understand the ways in which the characteristics of learning organizations and company characteristics themselves impact knowledge performance and financial performance in family-run firms. In order to accomplish this purpose three (3) research questions were proposed:

1. To what extent do Watkin's and Marsick's seven dimensions of the learning organization independently explain observed variances in their two outcome measures, knowledge performance and financial performance?
2. To what extent do select company characteristics independently explain observed variances in two outcome measures, knowledge performance and financial performance?
3. To what extent can these seven dimensions and select company characteristics jointly explain the observed variances in two outcome measures, knowledge performance and financial performance?

Methodology

The research methodology was quantitative survey research. This study used the Dimensions of the Learning Organization Questionnaire (DLOQ). For the scored DLOQ the coefficient alpha's for each of the scales ranged from .68 to .84. Several studies have verified the reliability and validity of this questionnaire (Watkins, Selden, and Marsick, 1997; Watkins, Yang and Marsick, 1997).

The context of this study was family businesses. To be included in the sample, a business had to have significant family involvement. Significant family involvement was determined by a family owning more than 50% of the stock, or, if less than 50% of the stock, then the business had more than one family stock holder or more than one family working in it.

A convenience sample of 2,966 family businesses was sent the DLOQ. Two reminder mailings were sent. The mailings resulted in 142 responses. In addition, 48 sent back a form explaining why they did not want to respond. This resulted in a total of 190 responses. One was unusable for a total of 189 usable responses for a response rate of 6.5%. This response rate is low but somewhat typical of family businesses according to family business researchers at the Family Enterprise Center at Kennesaw State University (J. Astrachan, personal communications, May 1997). In addition, a comparison of critical characteristics of this sample (number of employees, annual revenue, family stockholders) indicated that this sample is not significantly different from that obtained in two national studies (Nager, R.W., Beaudoin, L., Aronoff, C.E., Ward, J.L., 1995,1997)

Results

All data analysis was done using SAS on the mainframe computer at The University of Georgia. Research question #1 investigate to what extent do Watkin's and Marsick's seven dimensions of the learning organization independently explain observed variances in their two outcome measures, knowledge performance and financial performance. Analysis required examining bivariate relationships between the independent variables, *seven dimensions of the learning organization*, and the dependent variables, *knowledge performance and financial performance*. Simple regression was used on these variables. Additionally, coefficients of determination (r^2) were calculated to aid in the interpretation of the correlations. Tables 1 and 2 contains the results of this analysis.

Table 1: Correlations of the seven dimensions with Knowledge Performance

Independent Variable	**Correlations with knowledge performance (r)**	**p**	**Coefficient of Determination (r^2)**
Continuous Learning	.19	.03	.04
Inquiry and Dialogue	.14	.11	.02
Team Learning	.23	.01	.05
Systems to Capture Learning	.40	.0001	.16
Empower	.33	.0002	.11
Connect to Environment	.30	.0005	.09
Provide Leadership	.27	.002	.07

Table 2: Correlations of the seven dimensions with financial performance

Independent Variable	**Correlations with financial performance (r)**	**p**	**Coefficient of Determination (r^2)**
Continuous Learning	.28	.001	.08
Inquiry and Dialogue	.18	.04	.03
Team Learning	.21	.02	.04
Systems to Capture Learning	.28	.001	.08
Empower	.30	.0007	.09
Connect to Environment	.20	.02	.04
Provide Leadership	.26	.003	.07

Therefore, research question #1 found that all of the seven dimensions of a learning organization correlated positively and significantly ($p<.04$) with financial performance and all but *promoting inquiry and dialogue* ($p=.11$) correlated positively and significantly ($p<.03$) with knowledge performance.

Research question #2, examined to what extent select company characteristics independently explain observed variances in two outcome measures, knowledge performance and financial performance. Again, analysis required examining bivariate relationships between the *company characteristics* and the dependent variables, *knowledge performance and financial performance.* Three company characteristics, *how many family members owned stock, what percent of the business's stock is owned by family members, and how many family members work for the organization,* were continuous variables and simple regression was used to determine correlation. Two variables, *number of employees and annual revenue,* were ordinal and analyzed using Spearman Correlation Coefficients. Again, to aid in interpretation, coefficients of determination (r^2) were calculated. For research question #3, we found no significant relationships between selected company characteristics and knowledge performance or financial performance.

Research question #3 used exploratory model building requiring multiple regression analysis to determine to what extent Watkins and Marsick's seven dimensions and company characteristics jointly explain the observed variance in two performance outcomes, knowledge performance and financial performance. The purpose was to build towards a "best" model that maximized these performance outcomes.

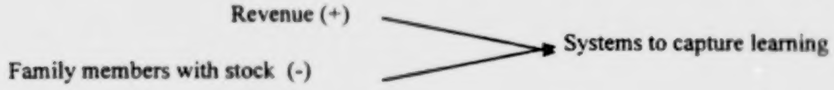
The first step was to take the seven dimensions of a learning organization and put them into a single, simultaneous, multiple regression. The SAS procedure PROC REG , "a general-purpose procedure" for ordinary least square regression, was used with the maximum r^2 option which is designed to find the best one variable model, the best two variable model, the best three variable model, etc.

This analysis resulted in one variable models for both knowledge performance and financial performance. These two separate models would be the cores of our final model. The first model showed that *systems to capture learning* ($r=.40, p=.0001$) was positively and significantly correlated with *knowledge performance.* A second model showed that *continuous learning* positively and significantly correlated with financial performance ($r=.28, p=.001$). Introducing a second variable to either of these models lowered the significance and did not appreciably increase the R^2 value. At this point we have two separate models:

Systems to capture learning (+) ——→ Knowledge Performance
Continuous Learning (+) ——→ Financial Performance

The next step was to introduce the background variables, company characteristics, into the model building as we built towards one model. Again, PROC REG was used to find the best one variable model, the best two variable model, the best three variable model, etc. that covaried with *systems to capture learning* and correlated with *continuous learning*, the two variables of significance from step #1. This analysis resulted in separate two variable models for both systems to capture learning and individual learning (see Tables 3 and 4). The first model indicates that *annual revenue* has a significant positive correlation with *systems to capture learning* when correlated with *family stockholders* which had a significant negative correlation with *systems to capture learning.* In our second model, *the number of employees* had a significant positive correlation with *continuous learning* when taken with *family stock* which had a significant negative correlation.

The two variable models look like this:



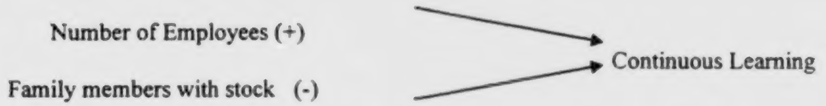


Table 3: Results of least square regression simultaneously introducing the background variables and the dependent variable *systems to capture learning*

Independent Variable	DF	F	p	R^2
Family who own stock and Annual Revenue	2	5.86	.0037	.08

Table 4: Results of least square regression simultaneously introducing the background variables and the dependent variable *continuous learning*

Independent Variable	DF	F	p	R^2
Family who own stock and Number of Employees	2	6.06	.003	.08

We next attempted to blend these two models into one ultimate model. We looked at the two dependent variables, knowledge and financial performance, and tried to determine in which sequence they would come. Logically, we determined that based on our theoretical model, knowledge performance leads the financial performance. We then re-ran the analysis PROC REG with knowledge performance as an independent variable to arrive at our final model. The following tables summarize the results:

Table 5: Results of least square regression analysis with Dependent Variable: *Financial Performance*

Model $R^2 = .21$

Independent Variable	Beta	p
Knowledge Performance	.37	.01
Continuous Learning	.22	.008

Table 6: Results of least square regression analysis with Dependent Variable: *Systems to capture learning*

Model $R^2 = .08$

Independent Variable	Beta	p
Revenue	.26	.003
Family who own stock	-.17	.05

Table 7: Results of the least square regression analysis with Dependent Variable: *Continuous Learning*

Model $R^2 = .08$

Independent Variable	Beta	p
Number of Employees	.22	.008
Family who own stock	-.20	.02

Table 8: Results of multiple regression analysis (bivariate) with dependent variables

Independent Variable	Dependent Variable	r^2	p
Systems to capture learning	Continuous Learning	.33	.0001
Systems to capture learning	Knowledge Performance	.16	.0001

Putting all of these together produces the following model:

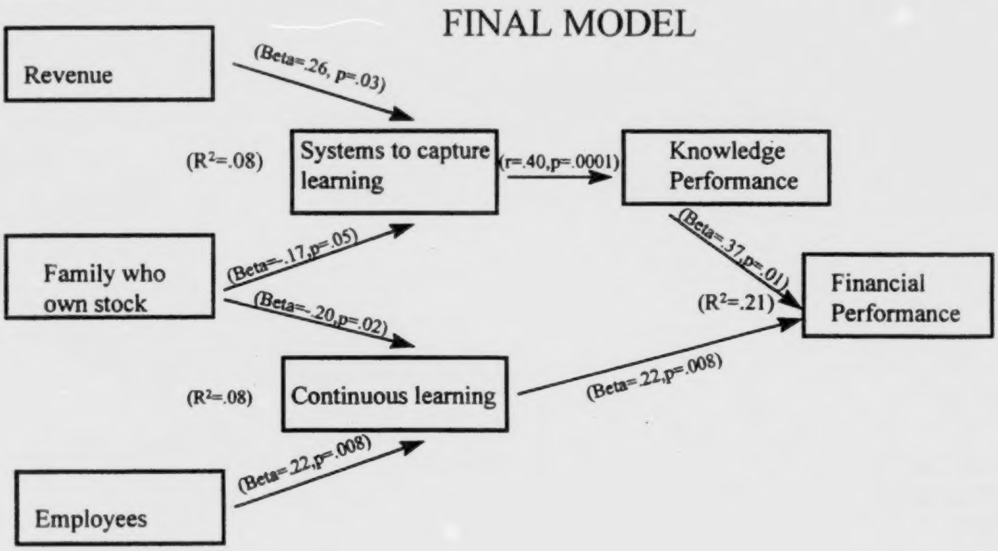

FINAL MODEL
Revenue
(Beta=.26, p=.03)
(R²=.08)
Systems to capture learning
(r=.40,p=.0001)
Knowledge Performance
(Beta=.37,p=.01)
Family who own stock
(Beta=-.17,p=.05)
(Beta=-.20,p=.02)
(R²=.21)
Financial Performance
(R²=.08)
Continuous learning
(Beta=.22,p=.008)
(Beta=.22,p=.008)
Employees

Figure 1

Therefore, figure 1 indicates that research question #3 can be answered as follows. Knowledge performance and financial performance can be explained by selected company characteristics and two of the seven dimensions of the learning organization.

Conclusions

The correlations between the *seven dimensions of the learning organization and knowledge performance* were all positive (see Table 1). All but *inquiry and dialogue* were significant (most at the p=.01 level or better). Having *systems in place to capture learning* was the strongest relationship representing 16% of the variance in knowledge performance. This is intuitively understandable. Organizations that put resources into capturing what they know will perform better in responding to customers, implementing suggestions, increasing the skills of workers, and spending money on technology and information processing. *Empowering people to a collective vision* (r^2=.11) and *connecting the organization to its external and internal environment* (r^2=.09) also had significant impact on knowledge performance. If employees understand where they are headed and have a good understanding of their collective environments, they will prepare themselves with the skills necessary to perform and they will rush to market new products/services that their customers need.

Interestingly, *promoting inquiry and dialogue* did not correlate significantly *with knowledge performance*. This may be influenced by the context of family businesses. In a closely held, family-run firm, it is possible that inquiry and dialogue are not promoted. Families may keep information close to their vests and not encourage information to be shared (Dyer, 1986). Another interesting finding was the variance represented by *promoting continuous learning*. It had the lowest coefficient of determination (r^2=.04) of all the positively correlated independent variables with knowledge performance. Again, the context may have influenced this statistic. Family businesses may not promote continuous learning with employees other than family.

The correlations between the *seven dimensions of the learning organization and financial performance* were all positive and significant (see Table 2). Again, *empowering people to a collective vision* (r^2=.09) and *systems to capture learning* (r^2=.08) represented the most variance in *financial performance*. This data support the notion that organizations with employees all dedicated to the same supra-ordinate goal working with systems that provide them the information to make good decisions will perform better financially.

The final model represented in figure 1 empirically supports many of the theories of learning organizations. Increased financial performance is one objective of almost all organizations. Our model suggests that 21% of the variance in *financial performance* can be attributed to the joint effect of *knowledge performance* and *promoting continuous learning* (see Table 5). Organizations that implement employee suggestions, introduce new products and services, increase skills of employees and devote, increasingly, more revenue to technology and information processing will increase their return on investment, average productivity of their workers, and gain market share. How should an organization promote knowledge performance and continuous learning? The answer lies in the balance of our model.

Knowledge performance is influenced strongly by investing in *systems to capture learning* (r^2=.16) (see Table 8). Companies that invest in technology and other systems like suggestion systems, bulletin boards, or town hall meetings are able to improve customer satisfaction, implement more positive suggestions, increase the number of new products and services and increase the skill base of their employees. This study found that the size of the company as measured by *annual revenue* had an impact on whether or not an organization *embedded systems to capture learning* when correlated with a characteristic of family businesses, *the number of family members who owned stock*, which had a significant negative correlation. Together, these two variables accounted for 8% of the variance in *systems to capture learning* (see Table 3).

Promoting continuous learning also played a significant role in *financial performance* when correlated with *knowledge performance*. What dimensions of the learning organization impact continuous learning? Our study found that size, as measured by the *number of employees* when correlated with the *number of family members* who own stock, which had a negative correlation, was the best model of *promoting continuous learning*. This makes sense. Training needs increase with the number of employees an organization has. Together, these two variables represented 8% of the variance in continuous learning (see Table 4).

The *number of family members who own stock* had a significant negative correlation with both *systems to capture knowledge* and *promoting continuous learning* when correlated with two measures of size (*revenue and the number of employees*) (see Tables 6 and 7). This may be explained by the fact that as the family business grows larger, more family become involved, not only working in the business, but as owners. The organization spends a great deal of its resources, financial and human, in managing the family issues that this increased involvement creates. This expenditure of resources takes away from the resources available to develop *systems to capture learning* and programs to *promote continuous learning* within the organization. This study would suggest that this negatively influences these dimensions and ultimately negatively impacts the financial performance of these family-run firms.

Significance to HRD

This study has tremendous significance to HRD practitioners. We are all convinced that what we do has impact on the organizations we serve. This feeling is not often shared with others outside of HRD. This study indicates some evidence that knowledge performance and continuous learning may have a positive bottom line impact. Measuring what we do will be the key to the inclusion of HRD as a business strategy. This study supports its inclusion. Also of importance is this study's contribution to HRD theory, particularly in the development of our empirically derived model of the relationship between company characteristics and the dimensions of a learning organization and performance.

There are several limitations to this study. The present study employed a convenience, non-random sample. Additionally, the response rate was poor. Therefore it is not possible to generalize the findings beyond the sample population. Further studies with large, random samples of family businesses are needed.

A second limitation is that this survey was answered by the chief executive officer of the family businesses in the sample. Often, the view is distorted at the top. Questions on the survey related to how, in general, people behave in their organization. Isolation, which is often the case at the top, may have resulted in bias and inaccurate responses. On the other hand, this limitation may also be a strength of this study since these individuals represent the most knowledgeable respondents in the organization. Finally, it can be argued that the questions used to determine knowledge performance and financial performance may not really measure these variables as effectively as obtaining actual performance data. More concrete measures of these performance variables in further studies may be necessary in order to make decisions about the impact of the independent variables on these variables.

References

Dyer, W.G. (1986). Cultural change in family firms. San Francisco: Jossey-Bass.

Marquardt, M. & Reynolds, A (1994). The global learning organization: Gaining competitive advantage through continuous learning. Burr Ridge, Illinois: Irwin.

McLagan, P. A. (1989, September). Models for HRD practice. Training and Development Journal. pp. 49-59.

Nadler, L. & Nadler, Z. (1991). Developing human resources. San Francisco: Jossey-Bass.

Nager, R.W., Beaudoin, L., Aronoff, C.E., Ward, J.L. (1995,1997). American Family Business Survey. Arthur Anderson & Company.

Senge, P. (1990a). The fifth discipline. New York: Doubleday.

Watkins, K. & Marsick, V. (1993). Sculpting the learning organization. San Francisco: Jossey-Bass.

Watkins, K. and Marsick, V.J. (1996) In action: Creating the learning organization. Alexandria, Va: American Society for Training and Development.

Watkins, K., Selden, G.L., and Marsick, V.J. (1997). Dimensions of the learning organization in family-run firms. Proceedings of the 1997 Academy of Human Resource Developers, pp. 383-389.

Watkins, K. Yang, B., and Marsick, V.J. (1997). Measuring dimensions of the learning organization. Proceedings of the 1997 Academy of Human Resource Developers, pp. 543-546.

The Relationship Between Individual and Collective Learning in the Learning Organization: Its Role and Effect in Defining the Profession of HRD

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The aim of this paper is to initiate a discussion in the profession about the role and purpose of HRD in the learning organization. The paper uses the concepts of learning found in the fields of HRD and adult education as lenses for the examination of individual and collective learning. We submit four postulates that we suggest serve as a starting point for this discussion of the profession of HRD.

The process of acquiring knowledge, and enhancing the knowledge base of adult learners, are well-established components of any theoretical conceptualization of adult education. Adult development, critical thinking, holistic and lifelong learning, andragogical and transformative learning are all widely accepted concepts of learning and research in adult education. While the primary focus remains the individual learner, the increasing focus on systemic analysis is aligning adult education closer to human resources development (HRD) than it has been in the past.

Similarly, the process of acquiring skills and of enhancing the knowledge base of employees in an organization is a well-established component of any theoretical conceptualization of HRD. Whether one includes a traditional view of the field, emphasizing mostly training and development, or a more contemporary view emphasizing organizational development, organizational behavior and human performance management, learning is a key component.

As the profession of HRD continues to seek to explicate and understand its role in a constantly changing environment, an understanding of the role that learning, a key component, plays in that process is critical. The purpose of this paper is to provide a starting point for this discussion. We use the learning organization as the frame for the discussion, and provide four postulates as a means to make recommendations for on-going discourse. These postulates are: (1) Collective learning is actualized through individual learning; (2) The primary role of individual learning is the actualization of the learning process; (3) The primary medium through which individual and collective learning is achieved is interaction with other members of the organization; (4) The primary roles of collective learning in a learning organization are the development of the vision, mission and goals for individuals and collectives, and the creation of the appropriate environment to enable learning.

The Links between HRD and Adult Education

There has been much work done on defining the profession of human resource development. Chalofsky (1992) identifies several definitions of HRD, which were devised over the span of 19 years. While each of these definitions is distinct, all include learning as the fundamental component of the profession. He suggests that the definition of learning within the context of HRD has changed in two major ways: (1) there has been a "shift from learning knowledge and skills to increasing learning capacity; and (2) the unit of development has expanded from just individuals to groups and organizations.

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The relationship between adult education and HRD is well established. Distinguished scholars in adult education such as Knowles (1984) have clearly articulated the premises of adult education in the workplace. Nadler (1979), in his conceptualization of the field of HRD, was clear in the role that adult education (i.e. training) played in the development of the human resources. He introduced the framework of training, education and development, suggesting that educational activities could be designed for specific types of situations. All educational activities focused on the individual, and the primary purpose of these events was to provide new information so that, individually, each could improve the organization.

The work on *learning organizations* (*Senge 1990;* Watkins and Marsick 1993) re-conceptualized the relationship between adult education and HRD. Framing educational activities within the *context of the learning* organization broadened the idea of adult education to include acquiring knowledge and turning it into valued information. This made it possible to include such HRD considerations as organizational effectiveness and building learning organizations within the context of adult education. More importantly, this expansion also included facilitating knowledge acquisition across groups and organizations, causing the idea of collective learning to be considered within the context of HRD.

To begin a discussion of individual and collective learning, we propose that an examination of the relationship between adult education (individual learning) and HRD (collective learning), within the context of the learning organization, provides important insights into our conceptualization of the profession . Morgan's (1986) metaphors for organizations provide a base for this discussion. Marsick (1990) used three of these metaphors for organizations to examine paradigms for practice and research in HRD. These metaphors, machine, systems, and cybernetics are presented here as vehicles, each providing a means to investigate the relationship between individual and collective learning, and the role that they play in the learning organization.

***The Machine Metaphor*.** In the machine metaphor the organization exists in an environment of rational decision making. In this organization, information is objective, concrete and constant. To an organization that is viewed as a machine, knowledge acquisition is mechanized and the process established to develop the knowledge is equally mechanistic. This model of adult education assumes that information is to be transmitted from management, who determines the learning needs and ascribes values to the educational activities.

In this framework, adult education is a classroom activity, where trainers assume the responsibility for determining what is to be learned. The role and purpose of adult education is confined to transmitting information. Program design and delivery are very rigid, with emphasis on "training tools. " Evaluation techniques are focused on the ability of the employee to complete a given task at the end of a training session. Traditional adult education considerations, such as the role of prior life experience and the need for adults to direct their own learning, are considered within the context of devising effective training sessions.

The organization's "machine" focuses on one-way delivery of information, done in hierarchical organization situations. It relies on a strong training function, centrally organized, where learning is seen as a collective activity, with content determined by knowledgeable experts. Within this context, education and human resource development are seen as parallel activities. They are both mechanical processes, where individuals participate in a series of activities designed to make the organization become more effective and efficient. Yet, the "learning" process is completely independent of the "development" process. While they may, in some organizations, support each other, this is not a requirement for successful functioning of either unit.

The Systems Metaphor The systems metaphor focuses on the parts of the system, and the relationship within one another, in an organization. Within this framework, each part impacts every other part. According to Marsick (1990), diverse viewpoints, and individual considerations must be accounted for, because they are integral to both the problem and the process.

The role of the HRD professional in this environment becomes one of integrating members of the organization. Because employees are now considered part of the system, transmission of information is only part of the role of HRD. In a systems driven organization, the relationship between adult education and HRD changes to include, in additional to the training and knowledge transmission activities, mechanisms where individuals utilize systems thinking, develop shared vision, and engage in team and organizational learning. The adult education conceptualization moves from delivering education, to facilitating knowledge dissemination and utilization. Within this context, HRD and adult education are integrated, yet separate functions. The role of the HRD professional becomes one of facilitator, and education is more broadly defined to include creating opportunities for employees to engage in continuous learning and collaborative activities. The constructs of adult education and HRD each contribute equally to help employees engage in continuous learning, and help the organization establish systems to capture learning and disseminate it.

The Hologram Metaphor. The hologram metaphor conceptualizes the organization as a brain. In this view, organizations are seen as centers of intelligence that are able to scan environments and make changes to insure survival of the organization. In a holographic organization "employees [are] encouraged to learn many aspects of the work so that, while each person posses specialized knowledge and skills, his or her overall understanding leads to contributions employers cannot even predict" (Marsick, 1990, p.10).

In this conceptualization of the organization, the goal of learning becomes knowledge creation. Vaill (1996) suggests that individuals are key factors in re-fashioning organizations into holographic entities, as individual knowledge is seen as a basic unit of information. In this framework, knowledge may be categorized as either tacit or explicit (Nonaka and Takeuchi, 1995). The key to creating a fully functioning, creative organization is the capacity of individuals to transform explicit knowledge into tacit knowledge, and vice versa. In a holographic organization, the conceptualization of knowledge shifts from the systems perspective of emphasizing the collective to creating high levels of individual creativity and knowledge through learning at both individual and collective levels.

In the holographic metaphor, the definitions of adult education and HRD become almost indistinguishable. Because learning is seen as an organic process, completely embedded into the organization, HRD/adult education is the means by which information that is held by each individual is clarified, made explicit and added to the organization's capabilities. The HRD/adult education function focuses on determining what each individual knows, helps establish an environment where knowledge can be created or expanded, and helps the organization utilize this knowledge as it interacts with its environment.

Using these metaphors to describe the relationship between HRD and adult education helps explicate the profession of HRD in two ways. First, the role that learning plays within the organization frames the way that HRD is conceptualized. In organizations where learning is perceived as mechanical, the conceptualization, and, subsequently, functions of HRD, is also seen as mechanical. In organizations where learning is seen as more organic, the HRD role is much more integrated, fluid, and integral to the organization.

Second, individual learning, as framed by adult education, and collective learning, as framed by HRD, each have a contribution to make as the profession of HRD is defined, and they are mutually dependent and important to the framing of the definition. As articulated by Watkins (1989) and Chalofsky (1992), defining the HRD profession must include consideration of both defining individual learning as translating information into valued knowledge and the collective aspect of knowledge acquisition. In mechanistic organizations where there is no need for information to be shared, the definition of HRD is necessarily very narrow and does not account for the ability of the organization to "learn." In situations where capturing knowledge for the entire organization is important, the definition of HRD is broadened to include creating and capturing individual and collective learning, and developing mechanisms to insure that knowledge is shared across the organization.

The Four Postulates

This analysis of the role of learning using the metaphors leads to two premises:
first, the key contribution from the field of Adult Education is an understanding of individual

learning, and second, the key contribution from the field of HRD is the capacity to discuss learning in the context of collectives. Within these two fields and their related disciplines, there exists a considerable body of research and knowledge in individual learning and an increasing amount of research in collective learning. But little has been done to define and examine the relationship between individual and collective learning. We believe that analysis of these two categories of learning provides a means to further explicate and understand the profession of HRD.

We submit four fundamental principles or postulates that provide a means for further examination of the construct of HRD, using the relationship between individual and collective learning as the premise for the discussion.

P_1: Collective learning is actualized through individual learning. The greater the opportunity for individual learning in an organization, the greater the likelihood that collective learning will occur, enhancing the development of a learning organization. Within the discussions of learning organizations there is an assumption that individual learning is occurring. Senge (1990) describes the learning organization as one where individuals work together across traditional boundaries to solve problems and create innovative solutions. He goes on to identify five disciplines necessary for a learning organization to exist These include both individual learning (personal mastery) and group learning (team learning). Watkins and Marsick (1993) identify six "action imperatives" necessary for creation of a learning organization. Three of these specifically address learning: creating continuous learning opportunities, promoting inquiry and dialogue, and encouraging collaboration and team learning. As with Senge, Marsick and Watkins address both individual and collective learning.

Nonaka and Takeuchi (1995) describe the integral part that individual information plays in the development of organizational knowledge, framing their discussion around the concepts of tacit and explicit knowledge. They view the translation of explicit and tacit knowledge as key components of a "knowledge creating company." The capacity of the organization to translate information across both the individual and collective is the learning capacity of the organization.

Pedler, Burgoyne and Boydell (1991) are more explicit in their linking of individual and organizational learning. They define a learning company as one that "facilitates the learning of all its members and continually transforms itself" (p1). They identify 10 characteristics of a learning company, several of which focus specifically on learning capacity, including opportunities for self-development (individual learning) and open exchange of information that promotes dialogue (collective learning). Pedler, Burgoyne and Boydell emphasize the individual's role in the learning organization, recognizing that, while an organization may continuously reinvent itself, the individual's capacity to learn is a key component of that capability.

Research in the field of self-directed learning provides substantial support for the role of individual learning and its effect upon the capacity of the organization to learn. The environments reported as necessary for self-directed learning to occur are strikingly similar to those described as learning organizations. These factors include supporting and challenging organizational settings, time for learning, effective communication systems, and collaboration among members of the organization (Baskett et al., 1993; Confessore and Bonner, 1996; Confessore and Confessore, 1993; Foucher and Brezot, 1997). A review of literature from the fields of organizational learning and SDL reveals common characteristics, including support for learning, that are linked to the goals and values of the organization, and provision of opportunities and situations for individual learning. Thus, while individual learning is not specifically addressed in much of the literature on organizational learning, there is clear evidence that individual and organizational learning are necessary for the establishment and continued operation of a learning organization.

P_2: The primary role of individual learning is the actualization of the learning process. Learning is a singular process. Adult learning is defined as the process of individuals gaining knowledge and expertise based on their personal goals (Swanson, et al., 1997). When discussing collective learning (team or group), more accurately it is the learning of the collective, i.e. the symbiotic, hopefully synergistic, relationship of persons sharing their individual understanding. A large amount of the collective learning that takes place in teams is the transfer of information. Characterized by Brooks (1994) as reflective work, it is described as sharing knowledge and information, and integrating the shared knowledge among the team members. Thus, it can be said that a large part of the "collective" learning process is the act of increasing the knowledge base of each of the members. Conversely, the capacity of the collective to "learn" is dependent on the capacity of the individual to both contribute to the process, and acquire information from it.

Teams, and the individuals involved in them, engage in use of tacit and explicit knowledge. Because tacit knowledge is personal and context specific, it is difficult to articulate, and thus share. Conversely, explicit knowledge, because it is codified, is transmittable. Tennant and Pogson (1995) describe tacit knowledge as being qualitatively different from explicit knowledge. In other words, the knowledge that one is able to share is inherently different from that which one is able to transmit. Thus, while teams are able to share information, and perhaps even "create knowledge" (Nonaka and Takeuchi (1995), this information is distinctly different from what is known by the individual.

The individual controls what is learned. The design, development and delivery of training and education is an external process; the internalization of all education consists of the individual selecting what they perceive they need to complement what they have previously internalized (learned). Knowles (1980) theorizes that learning is an internal process, and those learning experiences which involve the individual in self-directed inquiry will produce the greatest learning.

There are numerous factors that influence what is learned. One such factor is locus of control (Rotter, 1990), when "people attribute the cause or control of events to themselves or to an external environment" (Spector, 1982, p.493). The designation of internal control, where persons ascribe control of events to themselves, and external control, ascribing control to outside forces, governs both what is learned and the impact of the learning.

A related factor is the control of the instructional i.e., who controls the training or educational process that occurs. If this postulate is valid, and further research is needed to assess its validity, the primary controller is the learner. Each individual ultimately determines what will be internalized, what will be learned.

Cervero and Wilson (1994) note much training is focused on what is needed by the organization, with scant attention being given to the needs of the learner. The result is the low ratio between instruction and application. This suggests that, unless the learner is fully engaged and motivated in the activity, and instructional processes are fully activating and challenging, learning will be reduced.

***P_3*: *The primary medium through which individual and collective learning is achieved is interaction with other members of the organization*.** Evidence of this premise can be found in the literature, in self-directed learning , in continuing professional education, and in communities of practice. Managers who describe their own self-initiated learning activities identify colleagues as important resources for their learning (Kops, 1993). These managers cited individuals within their own organizations as important resources, but they also listed professional colleagues outside of their organizations as important. Thus, the ability to learn on an individual basis was determined, in large part, by the ability to interact with colleagues, share knowledge and clarify meaning.

Nowlen (1988), in his discussion of professionals' learning, describes a "double helix" of factors which impact the capacity of individuals to learn in their work settings. He identifies two "strands" or factors that impact the capacity of the individual to learn. These two strands, one' s own knowledge and values, and the professional and social environment in which the professional works interact to frame and define the knowledge obtained by the professional. Nowlen asserts that professional knowledge is formed by social interaction, and that all training and learning activities must account for both of these "strands" to be effective.

Brown and Duguid (1991), discussing Orr's work assert that learning occurs though informal discussion and exchange of information among employees. Communities of practice are informal networks and, by definition (Lave and Wenger, 1990), emerge as a natural result of work circumstances and environment, and interaction among members. The learning, which occurs within the communities, can be so specific that it is "situated." That is, if an individual moves to a different organization, this individual knowledge will be changed or lost because, in its present form, it will be meaningless. The knowledge held by each individual is framed, expanded and given meaning by the interaction of all individuals within the community of practice. Learning is truly a social process.

P_4: The primary roles of the learning organization in the individual and collective learning processes are: (1) the development, through shared decision making, of the vision, mission and related goals for individual and collective learning; and (2) the creation of the appropriate environment to encourage, support, and enable individual and collective learning. There is much discussion in the literature regarding whether organizations can learn. Watkins (1996) begins her discussion on learning organizations by asking the question "Do we anthropomorphize organizations when we try to say they learn?" (p. 89). She goes on to assert that organizations do, indeed learn, and defines organizational learning as the ability of the organization to retain, crystallize or embed new practices, values or understandings" (p.90). Other organizational experts, most notably Argyris and Schon (1978), Fiol and Lyles (1985), and Shivastava (1983) all assert that organizations can, and indeed do, "learn."

Organizational learning is distinctly different from individual learning. A key concept in organizational learning is that there is a body of corporate knowledge that is the essence of the organization: its norms, values and culture. Individual learning is an essential ingredient for organizational learning, yet each type is distinct, and organizational learning is more than just the collective information held by individual members. Regardless of the frame used to describe organizational learning, all include some dimension of transforming individual knowledge into knowledge that is collectively shared, interpreted and used throughout the organizational entity.

When conceptualized only within the framework of individual learning, organizations do not learn. They cannot learn. The learning process resides within the individual learner. In order for an organization to "learn" individuals must agree to share their knowledge with the collective. First, they must agree to come together for a specific purpose. The capacity to share information is related to the clarity of that purpose, and will be determined by the clarity of the vision, mission, and goals (VMG) of the organization. The clearer the VMG, as perceived by the members of the organization, the greater the likelihood of their being achieved. Further, the stronger the relationship between organizational and individual VMG, the greater the impact of the learning process.

People will be more motivated in an organization if they perceive their individual needs being fulfilled through their work (Herzberg, 1987). This should not be perceived as the organization identifying the needs of the organization. A key word in this context is alignment. Ideally, organizations will clearly develop their VMG, spend an equal amount of time working with managers, team leaders and teams to clarify the needs, desires, drives and motivations of the workers and align both as fully as possible.

A related primary activity of organizations is to enhance the capacity of individuals to learn. Knowles (1980) stressed the importance that environment plays in learning. Leading organizations, in a variety of industries, have developed learning environments that encourage self-directed and team learning, tolerate mistakes, acknowledge and award accomplishments, champion learning and empower employees (Handy, 1995; Watkins, 1996). Organizations may not be able to "learn" in the individual sense of the word. Yet, their ability to embed individual knowledge into their culture, and thus into their capacity, is dependent on providing a clear, humane direction and an environment where individual learning can thrive.

It is generally agreed that there can be no "group" learning without individual understanding. The nature of individual learning is distinct from both team and organizational learning in that there is a body of knowledge possessed by individual that is not possible to share. Collective learning, whose purpose is largely to transmit information, is distinctive in that, while it is possible to devise a common understanding it does not represent the entire knowledge base of each individual, and will be altered when membership in the collective changes. In a learning organization, there is a symbiotic relationship between individual and collective learning. Mechanisms are in place to support individual learning, which, in turn, enhances the knowledge of the collective. Similarly, the collective knowledge, and the knowledge dissemination mechanisms that are available affect the individual learning that occurs.

Conclusion

This paper has used the concepts of learning found in HRD and adult education as lenses to examine the relationship between individual and collective learning. Using the Morgan's metaphors for organizations, and the learning organization as a context, we sought to provide a beginning point of discussion for the role and tasks of HRD in new organizational structures. Four postulates were presented to explicate the relationship between individual and collective learning. Taken together, these statements propose that learning is a social activity, and can be accomplished both individually and collectively. Each type of learning is distinct, yet highly interdependent.

Analyzing individual and collective learning makes it possible to better define HRD's role. It also presents new challenges to practitioners and theoreticians. Current conceptualizations of HRD describe the need for practitioners to be knowledgeable and proficient in understanding learning at the collective level, yet our understanding of the types of learning is framed largely from the adult education, hence individual perspective. Distinguishing among these types of learning, and clarifying their interrelationships expands the conceptualization of HRD. More importantly, it challenges the field to investigate the theoretical and practical implications of these distinctions.

References

Argyris, C. and Schon, D. (1978). *Organizational learning: A theory of action perspective*. San Francisco: Jossey-Bass.

Baskett, M., Dixon, J., and Churchmuch, M. (1994, February). *Self-directedness in the workplace: A re-examination.* Paper presented at the Eighth International symposium Self-Directed learning, West Palm Beach, FL.

Brooks, A. (1994). Power and the production of knowledge: Collective team learning in work organizations. *Human Resource Development Quarterly, 5* (3), 213-235.

Brown, J., and Duguid, P. (1991). Organizational learning and communities of practice: Toward a unified view of working, learning and innovation. *Organization Science, 3* (1), 40-56.

Cervero, R. and Wilson, A. (1994). *Planning responsibly for adult education: A guide to negotiating power and interests*. San Francisco: Jossey-Bass.

Chalofsky, N. (1992). A Unifying Definition for the Human Resource Development Profession. *Human Resource Development Quarterly 3*, (2), 175-181.

Confessore, S.J. and Bonner, D. (1997). Learning in adversity. Incidence of learning among downsized employees. In H.B. Long and Associates, *Expanding horizons in self-directed learning*. Norman, OK; Public managers Center, College of Education, University of Oklahoma.

Confessore, S.J. and Confessore, G.J. (1993). The extent and nature of employee-initiated self-directed learning in the workplace. In L. Korhonen (ed.), *National Research Conference on Human Resource Development: Quest for Quality*. College Station: Texas A&M University.

Fiol, M. and Lyles, M. "Organizational learning. *Academy of Management Review*, 10 (4), 803-813.

Foucher, R. and Brezot, F. (1997). Self-directed learning in health care institutions—an analysis of policies and practices. In H.B. Long and Associates, *Expanding horizons in self-directed learning*. Norman, OK; Public managers Center, College of Education, University of Oklahoma.

Handy, C. (1995). Managing the dream. In S. Chawla and J. Renesch (Eds.) *Learning organizations: Developing cultures for tomorrow's workplace*. Portland OR: Productivity Press.

Herzberg, F. (1987). One more time: How do you motivate employees? In L. Boone and D. Bowen (Eds.). *The great writings in management and organizational Behavior*. New York: McGraw-Hill.

Knowles, M. (1980). *The modern practice of adult education: From pedagogy to andragogy*. Chicago: Follett.

Knowles, M. and Associates(1984). *Andragogy in action: Applying modern principles of adult learning*. San Francisco: Jossey-Bass

Kops,W. (1993). Self-planned learning efforts of managers in an organizational context. In H.B. Long and Associates (Eds). *Emerging perspectives of self-directed learning*. Norman, OK: Oklahoma Center for Continuing Professional and Higher Education, University of Oklahoma.

Lave, J. and Wenger, E. (1990). *Situated learning: Legitimate peripheral participation*. Cambridge University Press

Marsick, V. (1990). Altering the paradigm for theory building and research in human resource development. *Human Resource Development Quarterly 1*, (1), 5-24.

Morgan, G. (1986). *Images of organization*. Newbury Park, CA: Sage.

Nadler, L. (1979). *Developing human resources*. Austin, TX: Learning Concepts

Nonaka, I. and Takeuchi, H. (1995). *The knowledge creating company*. NY: Oxford University Press, Inc.

Nowlen, P. (1988). *A new approach to continuing education for business and the professions*. NY: MacMillan.

Pedler, M., Burgoyne, J. and Boydell t. (1991). *The learning company*. London: McGraw-Hill.

Rotter, J. (1990). Internal versus external control of reinforcement: A case history of a variable. *American Psychologist, 45*,(4), 489-493.

Senge, P. (1990). *The fifth discipline. The art and practice of the learning organization*. New York: Doubleday.

Shivastava, P. (1983). A typology of organizational learning systems. *Journal of Management Studies, 20*, 7-28.

Spector, P. (1982). Behavior in organization as a function of employee's locus of control. *Psychological Bulletin, 91*, (3), 482-497.

Swanson, R., Provo, J., Gamble, T. & Tilson, T. (1997) *The locus of control in the adult learning planning process: A research agenda*. In the 1997 Proceedings of the Academy for Human Resource Development. Baton Rouge, LA: AHRD, pp. 220-227.

Tennant, M., and Pogson, P. (1995). *Learning and change in the adult years*. San Francisco: Jossey Bass.

Vaill, P. (1996). *Learning as a way of being*. San Francisco: Jossey-Bass.

Watkins, K. (1989). Business and industry. In S. Merriam and P. Cunningham (Eds.) *Handbook of adult and continuing education*. San Francisco: Jossey-Bass.

Watkins, K. (1996). Of course organizations learn! In R.W. Rowden (Ed.). *Workplace Learning: Debating five critical questions of theory and practice*. New Directions for Adult and Continuing Education, 72, 89-96.

Watkins, K. and Marsick, V. (1993). *Sculpting the learning organization: Lessons in the art and science of systematic change*. San Francisco: Jossey-Bass.

Human Resource Development's Role in Supporting and Shaping Strategic Organizational Planning

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The role of human resource development (HRD) in strategic organizational planning is ill-defined, at best. This treatise offers a preliminary model for thinking about the theory and practice of strategic human resource development. Central to the hypothesized strategic contributions of HRD are the three strategic roles of HRD identified by Torraco and Swanson (1995) and the inclusion of scenario building as presented by Miller, Lynham, Provo, and St. Claire (1997) along with traditional strategic planning into the larger framework of strategic organizational planning.

Torraco's and Swanson's (1996) recent article discusses the theoretical issues surrounding the role of HRD in strategic organizational planning. They note two factors that have influenced the evolution of HRD toward a more active role as a key determinant of business strategy: the centrality of information technology to business success and the sustainable competitive advantage offered by workforce expertise.

These factors work together in such a way that the competitive advantages they offer are nearly impossible to achieve without developing and maintaining a highly competent workforce. They go on to build the case for HRD that is truly of strategic value to an organization is (1) performance-based; (2) demonstrates its strategic capability, and (3) is responsive to the emergent nature of strategy.

Parallel to the concept of traditional strategic planning is the idea of scenario building. Schwartz (1996) defines a scenario as "A tool for ordering one's perceptions about the future environments in which decisions might be played out" p. 4). This tool is most often in the form of a story or plot lines which allows the organization members to fully explore a rich story of possible future events. These scenarios are stories describing the current and future states of the business environment and they become 'stories' about alternative possible futures (van der Heijden, 1996).

"Scenarios deal with two worlds: the world of facts and the world of perceptions. They explore for facts but they aim at perceptions inside the heads of decision makers. Their purpose is to gather and transform information of strategic significance into fresh perceptions" (Wack, 1985a, p. 140). Used in this way scenario planning presents "... an efficient approach to strategic business planning, focusing on business ideas in an uncertain world" (van der Heijden, 1996, p. 2). The problem is one of not knowing the fit between strategic panning and scenario building along with the role of HRD in shaping and supporting strategic organizational planning.

Inquiry Questions

The questions for this initial theory building effort are as follows:
1. What is the relationship between scenario building and strategic planning?
2. What shaping and supporting contributions can HRD make to the scenario building and strategic planning components of strategic organizational planning?
3. What is the strategic organizational planning research agenda facing the HRD profession?

Strategic Roles of HRD

HRD is defined as a process for developing and/or unleashing human expertise for the purpose of improving performance at the organizational, work process, or individual contributor levels (Swanson, 1996). Furthermore, three strategic roles for HRD have been put forward by Torraco and Swanson (1995). These three HRD strategic roles are used as the springboard of this inquiry are described as follows:

Performance-Based HRD HRD has a history of serving a wide range of organizational demands interests from the personal development needs of individuals organizational transformations to involving

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everyone in the organization. When HRD addresses the personal interests of employees, it is most likely not being strategic. For HRD to offer real strategic value to the organization, it must contribute directly to important business goals and must be based on key business performance requirements (Swanson, 1996).

Demonstrating the Strategic Capability of HRD To fully demonstrate the strategic importance of HRD, it must be more than performance-based. HRD will only be perceived as having strategic value if it also demonstrates genuine *strategic capability*. As HRD demonstrates *strategic capability*, it earns respect and credibility as a full partner in forging the organization's future direction.

Strategic capability challenges HRD to contribute beyond interventions that support a given strategic initiative. *Strategic capability* is based on a HRD philosophy that reflects the value of human resources in the pursuit of long-range business goals and the conviction that people are the only organizational resource that can shape and recreate the ways in which all other business resources are used. HRD demonstrates its *strategic capability* to the organization's business planning process by: (a) providing education and learning in the concepts and methods of strategic organizational planning to those responsible for setting the strategic direction for the organization; and (b) having HRD professionals directly participate in the strategic organizational planning process. Together these two features dramatically emphasize HRD's value to the business planning process and distinguish HRD as having *strategic capability*.

Emergent Strategy and HRD HRD traditionally has served a role supportive to strategy. HRD that primarily serves to support the execution of a given strategy fills an adjunctive role to strategy that is clearly more *deliberate* than *emergent*. Thus, a majority of the HRD effort purporting to be strategic provides the workforce with important expertise after the formulation and adoption of strategy by others. HRD cannot add value to the shaping of strategy if the strategy is already fully formulated.

If strategy is treated as both a deliberate and emergent phenomenon the benefits of developing and using employee expertise to capitalize on evolving business opportunities can then be realized. The potential for HRD's strategic leverage must exist by treating strategic planning as an emergent process. Further prescriptions for advancing the strategic contributions of HRD are of little value if strategy is fully formulated and adopted without the performance perspectives that HRD offers.

Scenario Building and Strategic Planning

Miller, Lynham, Provo, and St. Claire (1997) have provided a useful overview of scenario building for the HRD profession. The following summary mirrors their analysis of the scenario building component of strategic organizational planning along with the traditional strategic planning component.

As more organizations face continuous change as the order of the day, organizational professionals have developed expertise and tools to operate successfully in such an environment. The traditional tools of strategic planning, which are commonly extrapolations of the past to determine the future, are not effective when future forces do not mirror past forces (Mintzberg, 1994). In an environment of constant change and challenge, non-traditional tools for anticipating and planning for change are needed. One such tool is scenario building.

A scenario is "a tool for ordering one's perceptions about alternative future environments in which decisions might be played out" (Schwartz, 1996, p. 4). The process of scenario planning generally involves development of several plots and supporting narratives that illustrate primary forces driving change within a system, their interrelationships, and uncertainties in the environment (Wack, 1985a). Scenarios help decision makers structure and think about uncertainty, test their assumptions about how critical driving forces will interact, and reorganize their mental model of reality (Wack, 1985b).

Scenario development is described as an art rather than a science (Schwartz, 1996). By providing safe and often engaging opportunities to explore the implications of uncertainty and to think through ways of responding to it, scenarios enable planners to deal more confidently in the midst of uncertainty (Schwartz, 1996; van der Heijden, 1995).

Van der Heijden (1996) characterizes the individual and organizational learning process of scenario building: by organizing complex information on future trends and possibilities into a series of plausible stories, scenarios are seen as interpretive tools which create meaning and thereby guide action. The use of multiple plausible futures helps decision makers think more expansively about change and to adopt multiple perspectives for the purpose of understanding future events. In the end, scenarios offer entrepreneurial and protective benefits to organizations (Wack, 1985a).

The Centre for Innovative Leadership (van der Merwe, 1997) describes the scenario development process as follows:

1. Identification of a strategic organizational agenda, including assumptions and concerns about current strategic thinking and vision.
2. Challenging of existing assumptions of organizational decision makers by questioning current mental models about the external environment.
3. Systematically examining the organization's external environment to improve understanding of the structure of the key forces driving change.
4. Synthesis of information about possible future events into three or four alternative plots or story lines about possible futures.
5. Development of narratives around the story lines to make the stories relevant and compelling to decision makers.
6. Use of the stories to help decision makers "re-view" their strategic thinking.

Traditional *strategic planning* talks of the business planning and systems thinking required of those responsible for setting the strategic direction for the organization (Mintzberg, 1994). Presumably, those who participate in strategic planning possess the business acumen and understanding needed for meaningful contributions to long-term planning. However, strategic planning by itself requires a sophisticated array of conceptual, analytical, and interpersonal skills. Business planning involves strategic decisions that are frequently group decisions. Planners, therefore, need skills in problem definition, facilitating analysis by the group, resolving communication breakdowns, reaching consensus, and building commitment. Skills associated with strategic planning include environmental scanning, analyses of industries and competition, organizational analysis ("SWOTs"), competitive benchmarking, using systems frameworks to identify inconsistencies and threats to business development, and clarifying and articulating a unified organizational mission.

Together, *scenario building* and *strategic planning* are proposed as a holistic view of strategic organizational planning (SOP). Figure 1 graphically illustrates the SOP components and their relationships. The SOP "double funnel" graphically contrasts the roles and relationships between scenario building and strategic planning in the SOP process. Scenario building flares out the thinking in its expansiveness and strategic planning reins in the thinking into an action plan. All the while, both SOP phases are operating in the complex environment and SOP is viewed as a continuing process. HRD engages in supporting and shaping the process.

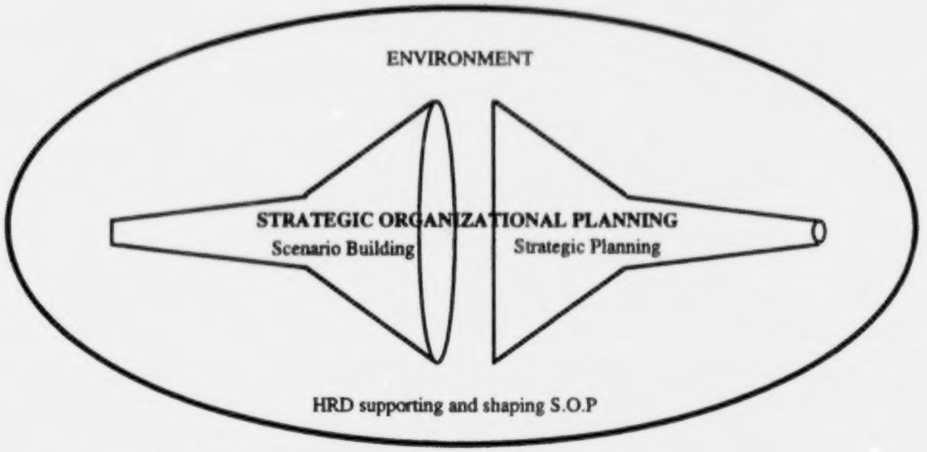
Figure 1: **STRATEGIC ORGANIZATIONAL PLANNING (SOP)**
ENVIRONMENT
STRATEGIC ORGANIZATIONAL PLANNING
Scenario Building
Strategic Planning
HRD supporting and shaping S.O.P

Contributions of HRD to Strategic Organizational Planning

What, then, are the potential contributions of HRD to strategic organizational planning (SOP)? In order to explore this question a matrix of the three HRD strategic roles in context of the two SOP components, scenario building and strategic planning, is proposed in Figure 2. It is important to highlight the definitions of scenario building as an expansive process and strategic planning as a reductionist process as being crucial to the exploration of the interpretation of HRD contributions to SOP.

Table 1. **HUMAN RESOURCE DEVELOPMENT'S CONTRIBUTION IN SUPPORTING AND SHAPING STRATEGIC ORGANIZATIONAL PLANNING (SOP)**

	STRATEGIC ORGANIZATIONAL PLANNING:	
HRD STRATEGIC ROLES:	***A: SCENARIO BUILDING*** *Defined:* SB is a process for ordering perceptions about the future environments in which decisions might be played out (Schwartz, 1991, p. 4).	***B: STRATEGIC PLANNING*** *Defined:* SP is a process for developing a comprehensive statement of the organization's mission, objectives, and strategy
1. PERFORMANCE-BASED *Defined:* HRD must contribute directly to important business goals and must be based on key business performance requirements (Torraco & Swanson, 1995, p. 17).	*Contribution:* • HRD provides critical judgements as to the organization's probability of being able to develop and/or unleash the human expertise required of the various BSs being proposed and what each would require.	*Contribution:* • HRD provides a road map for developing and/or unleashing the human expertise required to achieve the strategic plan and commitment to execute related SP action plans.
2. STRATEGIC CAPABILITY *Defined:* To demonstrate genuinely strategic capability HRD (a) provides SOP education and learning, and (b) actively participates in the SOP process (Torraco & Swanson, 1995).	*Contribution:* • HRD oversees the SB education and learning required of personnel for building "shared, integrated mental models of multiple plausible futures" (Lynham, Provo & Ruona, 1998, p. 6). • HRD experts serve as contributors of key human resource information and value all information being considered during the SB process.	*Contribution:* • HRD oversees the SP education and learning required of personnel for planning strategy, including the analysis and synthesis of internal and external conditions. • HRD experts participate on the SP team and act as a catalyst to create new business based on the strategic development and/or unleashing of human expertise. (see Mintzberg, 1994).
3. EMERGENT STRATEGY *Defined:* HRD assumes a deliberate role in the emergent nature of SOP (Torraco & Swanson, 1995).	*Contribution:* • HRD creates and maintains "an institutional learning and memory system...and helps an organization avoid repeating mistakes" (Van der Heijden, 1996, p. 2.) within the realm of core expertise and new learning requirements. • HRD assumes itself critical to the ongoing strategic SB conversations of the organization. SB makes "discussing strategy a natural part of any [HRD] management task and not the exclusive domain of specialist" (Van der Heijden, 1996, p. 22)	*Contribution:* • HRD creates and maintains a system for ongoing learning (in the forms of internalization, comprehension, and synthesis) from its own SP effort . • HRD assumes itself critical in the catalytic information-sharing, strategic partnering, and strategy finding SP challenge facing its host organization. (see Mintzberg, 1994).

The Strategic Organizational Planning Research Agenda facing the HRD Profession

The following research agenda is based on the contribution cells of the supporting and shaping of strategic organization planning matrix (Figure 2). The three strategic roles of HRD are used as the major organizers of the proposed research agenda.

Performance-Based

1. From a *strategic planning* perspective, the profession needs to learn why HRD is not able to consistently provide a road map for developing and/or unleashing the human expertise required of an organization to achieve its strategic plan and is not able to consistently fulfilling its commitment to execute its related SP action plans.
2. From a *scenario building* perspective, the HRD profession needs to cull out valid tools for making critical judgments as to an organization's probability of being able to develop and/or unleash the human expertise required of the various BSs.

Strategic Capability

3. From a *strategic planning* perspective, the HRD profession needs to develop and validate a core strategy for overseeing the SP education and learning required of personnel for planning strategy (including the analysis and synthesis of internal and external conditions).
4. From a *strategic planning* perspective, the HRD profession needs to develop and validate a process (grounded in performance-based strategic contributions) for legitimizing their role as experts on the SP team in creating new business based on the strategic development and/or unleashing of human expertise.
5. From a *scenario building* perspective, the HRD profession needs to develop and validate a core strategy for overseeing the SB education and learning required of personnel for building shared, integrated mental models of multiple plausible futures.
6. From a *scenario building* perspective, the HRD profession needs to develop and validate a process (grounded in performance-based strategic contributions) for legitimizing their role as experts on the SB team in contributing of key human resource information and value all information being considered during SB.

Emergent Strategy

7. From a *strategic planning* perspective, the HRD profession needs to develop and validate a system for creating and maintaining ongoing learning and systems thinking (in the forms of internalization, comprehension, and synthesis) from its own SP effort.
8. From a *strategic planning* perspective the HRD profession needs to develop and validate a SP process of information-sharing, strategic partnering, and strategy finding critical to its host organization.
9. From a *scenario building* perspective, the HRD profession needs to develop and validate an institutional learning and memory system that helps an organization avoid repeating mistakes within the realm of core expertise and new learning requirements.
10. From a *scenario building* perspective, the HRD profession needs to develop and validate a process of engaging in ongoing strategic conversations of the organization from the HRD perspective.

Results and Conclusions

HRD has been traditionally relied upon to serve in roles that are supportive of the strategies chosen to guide organizations. Although the supporting role of HRD is important for operational success in assuring the employee competence to meet present performance demands, HRD offers even greater strategic value as a major force in the shaping of business strategy. The strategic attributes of HRD include: (a) performance-based; (b) demonstration of strategic capability; and (c) responsiveness to the emergent nature of strategy.

The findings in this paper concludes that scenario building and strategic planning are integral to a complete model of strategic organizational planning. Furthermore, this holistic view also provides a means of advancing the three strategic goals of HRD and their specific contributions to scenario building and strategic planning and the supporting research agenda.

References

Miller, R. F., Lynham, S. A., Provo, J., & St. Claire, J. M. (1997). Examination of the use of scenarios as learning and decision-making tools for human resource development. in R. Torraco (Ed.) *Academy of Human Resource Development 1997 Conference Proceedings*. Baton Rouge: AHRD. 80-91.

Mintzberg, H. (1994). The rise and fall of strategic planning. New York: Free Press.

Schwartz, P. (1996). *The art of the long view*. New York: Currency-Doubleday.

Tichy, N. M. (1983). *Managing strategic change*. New York: Wiley.

Tichy. N. M., Fombrun, C. J., & Devanna, M. A. (1982). Strategic human resource management. *Sloan Management Review, 22,* 47-60.

Torraco, R. J., & Swanson, R. A. (1995). The strategic roles of human resource development. *Human Resource Planning*, 18 (4), 11-21.

Van der Heijden, K. (1996). *Scenarios: The art of strategic conversation*. New York: John Wiley & Sons.

Van der Merwe, L. (1997). *Scenario building* (unpublished document and keynote address for the 1997 AHRD Annual Conference). Centre for Innovative Leadership: Johannesburg, South Africa.

Wack, P. (1985a). Scenarios: Uncharted waters ahead. *Harvard Business Review*, 63 (5), 73-89.

Wack, P. (1985b). Scenarios: Shooting the rapids. *Harvard Business Review*, 63 (6), 139-150.

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Integrating Learning and Performance Domains in HRD Theory

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This article suggests that the "learning versus performance" debate is largely the result of inadequately defined models and constructs. A new performance model was developed that shows how learning and performance should be conceptually integrated. The model clearly shows that over-reliance on narrow definitions of performance or learning are equally flawed and have resulted in an artificial distinction between learning and performance in HRD theory.

Performance is a multi-dimensional and poorly defined construct. For example, people say that individuals perform, departments perform, organizations perform, groups perform, animals perform, and machines perform. So what is meant when people say "performance" and "performance improvement"? More importantly, what should the human resource development professionals mean when they talk about these constructs? The purpose of this paper is to address this core issue.

The lack of clarity about performance, and particularly performance domains, has created a "learning versus performance" divide within HRD (Swanson, R., 1995; Watkins & Marsick, 1995). It is unfortunate that performance has developed such a threatening connotation. Performance scholars have to accept some blame as they have allowed performance to be perceived narrowly as actual outcomes, particularly economic outcomes, often resulting in abusive, short-term, uni-dimensional performance improvement efforts such as reengineering, downsizing, and cost-cutting. When viewed in a comprehensive systemic manner, performance is far from abusive or narrowly defined, but rather most closely follows the systemic view of organizations and shows the most promise for building healthy, effective organizations over the long run.

In this article, I suggest that performance, when properly defined and utilized, is the correct organizing framework for HRD. More specifically, this article will:

- evaluate representative models of performance from multiple disciplines
- propose an integrated taxonomy of performance domains
- demonstrate conceptually how learning and performance should be integrated in HRD theory

Disciplinary Perspectives on Performance

HRD is not the only discipline that is interested in performance and performance improvement. To clarify perspectives of performance, a search was conducted for representative performance models in disciplines closely associated with HRD (Holton, in press). These models illustrate the diversity of performance perspectives and point to key considerations in designing an integrated performance taxonomy:

Performance is a multi-disciplinary phenomenon. Many different disciplines study

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performance. My search revealed performance models in a wide range of disciplines including psychology, human resource management, ethics, quality, sociology, economics, strategic management, and industrial engineering.

The relationship between performance and learning is poorly defined. While human resource developers know that learning and development efforts can lead to performance improvement, performance models do not clearly embrace developmental interventions. This has led to often dichotomized positions that can be termed the "performance versus learning debate as a matter of convenience" (see Swanson, R. A., 1995 and Watkins & Marsick, 1995).

Performance models have a disciplinary bias. Each discipline has defined performance to fit its unique needs. For example, psychology, which focuses on individuals, has defined performance through the individual lens (Campbell, 1990). The quality movement, which focuses on improving organizational processes, sees performance through a process lens (Juran, 1992). Strategic management, which focuses on positioning the organization competitively, sees performance through the organization and industry lens (Porter, 1980). While there is nothing inherently wrong with a disciplinary bias, it does indicate a need for caution when viewing performance models from other disciplines.

There is no such thing as a single view of performance. Each discipline or perspective has defined performance in a way that fits its purpose. The search for a single model of performance may be a futile search, or at least likely to result in a model so complex as to be unusable. Each discipline has had to limit its performance models to focus on aspects of performance appropriate for that discipline. The lesson is that HRD must define performance in a manner that fits its unique role in performance improvement and that acknowledges the legitimate role of other disciplines. It is not essential that HRD's model define every possible view of performance.

Levels of performance and indicators of performance are confused in some models. One persistent source of confusion in the literature is between levels of performance, and indicators or metrics of performance. For example, several models include customer as a level of performance (Edvinsson & Malone, 1997; Juran, 1992; Kaplan & Norton, 1996). Clearly customer satisfaction is important, but it is an indicator of process and organizational performance, not a level of performance. Similarly, several models define some aspect of employee behavior such as learning (Edvinsson & Malone, 1997; Kaplan & Norton, 1996), demonstrating effort (Campbell, 1990), or individual ethics (Swanson, D.L., 1995) as a level of performance. All are really indicators of individual performance and are defined as levels due to disciplinary biases.

Sub-systems in the models vary widely. Part of the disciplinary bias is reflected in the sub-systems included in the models. Organization development (Cummings & Worley, 1993) defines groups as their sub-system, because OD focuses on interpersonal dimensions of an organization. Needs assessment (McGehee & Thayer, 1961; Sleezer, 1991) defines work or task as their sub-system because of its analytical focus. Others (Rummler & Brache, 1995; Swanson, 1994) include process as their sub-system reflecting current emphasis on process improvement. In the case of human capital or strategic management, the organization becomes the sub-system, with society as the larger system. Thus, there seems to be little clarity either within or outside HRD.

Need for an Integrated Model of Performance Domains

The issues outlined above point to the need for an integrated taxonomy of performance domains for HRD. It is difficult to construct a performance improvement research agenda when there is no clarity about how to integrate the various ideas about performance domains and metrics. At the 1997 Academy of Human Resource Development Annual Conference, a pre-conference session on Performance identified the following criteria for an integrated taxonomy:

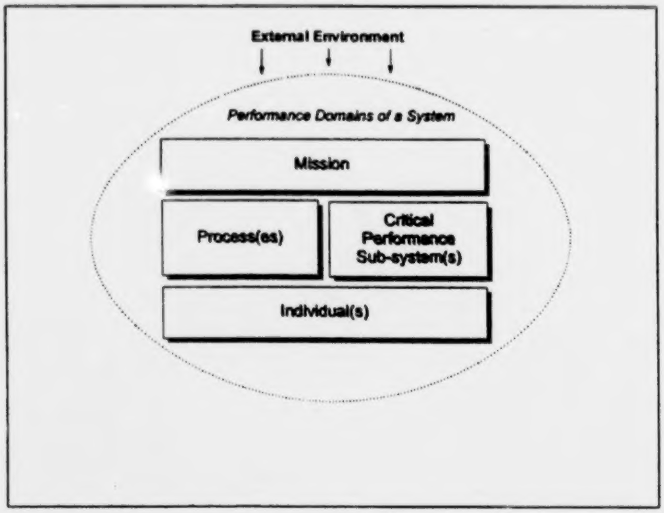
- *Parsimonious* - It is easy to develop a huge taxonomy of performance domains when one considers all the possible performance levels and situations. The challenge is to develop a parsimonious taxonomy that is broad without being unwieldy.
- *Situationally adaptable* - It was clear that performance is defined quite differently in different organizations, situations, and cultures. What is needed is a taxonomy that is flexible and adaptable to different performance systems, rather than searching for one definition of performance.
- *Embraces multiple organization types* - Performance is not just a private sector; every organization and individual performs. Governments perform, non-profit organizations perform, and communities perform. A performance taxonomy must embrace these entities, as well as for-profit organizations.
- *Embrace multiple measures of performance* - As noted above, there is considerable confusion between levels of performance and metrics of performance. A useful taxonomy must address this by embracing multiple measures of performance.
- *Embraces learning and development as part of performance* – Performance and learning are not opposing forces in organizations, but rather should be complementary when properly defined.

In addition, I argue that a performance taxonomy must be applicable to every performance system. That is, laundry lists of possible performance levels that may or may not apply to a given system do little to guide research or practice. Thus, it is not acceptable to include societal performance in a performance taxonomy as a possible level of performance because some systems do not define their mission in those terms.

An Integrated Taxonomy of Performance Domains

Figure 1 presents an integrated taxonomy of performance system domains. Four domains of performance are proposed: mission, process, critical performance sub-system, and individual.

Figure 1


External Environment
Performance Domains of a System
Mission
Process(es)
Critical Performance Sub-system(s)
Individual(s)

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Mission Domain The system's mission, and the goals derived from it, specify the expected outcomes of that system. Every purposefully organized system operates with a mission, either explicitly or implicitly, and the role of the mission is to reflect the system's relationship with its external environment. For a business organization, the mission may reflect its relationship with its industry, society and competitors. For a non-profit organization, its mission may reflect its relationship with the community and society. It is not necessary to specify in the taxonomy what the possible levels of impact outside the system are, because the mission will reflect that system's understanding of its responsibilities to the external environment.

It is important to note that the concept of "performance system" is used instead of "organization." A mission may be defined for any system organized to accomplish some purpose. If the system has a purpose, then it also has desired outputs, so performance theory is applicable. In many instances, the mission domain will be the same as the organization domain, particularly in for-profit firms. However, for a trade association, the mission domain may focus on an entire industry, or an entire profession for a professional association. In other situations, the mission may include community outcomes, or societal outcomes.

The particular system's definition of its performance relationship with the external environment is fully captured by the mission and goals of the organization. For business organizations, the metrics are likely to be dominated by traditional business outcome measures, including economic outcomes (more on metrics later). However, the mission domain for a government organization may be dominated by metrics assessing societal benefits.

The notion that the performance perspective only embraces economic returns as the system's mission (Bierema, 1997; Dirkx, 1997) is fundamentally flawed. Performance is defined by and depends on the mission of the organization. The purpose of HRD is to improve performance of the system in which it is embedded and which provides the resources to support it (Swanson & Arnold, 1997). All interventions and activities undertaken by HRD must ultimately enhance that system's performance.

Process Domain One of the positive outcomes of the quality and reengineering movements is the realization that managing and designing effective processes is an essential part of performance improvement. A number of performance models have clearly articulated the need for including the process domain of performance (Juran, 1992; Hammer & Champy, 1993; Hronec, 1993; Kaplan & Norton, 1996; Rummler & Brache, 1995; Swanson, 1994). Readers desiring a deeper understanding of the importance of process to performance improvement should consult these sources.

Critical Performance Sub-system This taxonomy includes a domain for critical performance sub-system (CPS). A CPS is defined as an internal sub-system for which performance goals have been set that are derived from, and contribute to, the mission of the overall system. Thus, the core difference between this domain and the mission domain is that the mission domain defines performance outcomes relative to the external environment, while the CPS domain defines internal performance sub-systems that do not always directly connect with the external environment. A CPS is not the same as process, because processes usually cut across multiple performance sub-systems and each sub-system is usually part of many processes.

One of the weaknesses of prominent integrated performance models (Rummler & Brache, 1995; Swanson, 1994) is that they do not appear to embrace productive sub-systems within an organization. While it can be argued that integrated models can be applied to sub-systems and then aggregated to the larger system, I argue that definitional confusion around this issue is one cause of the proliferation of performance models. That is, by appearing to ignore teams, divisions, departments, functions, etc., the integrated performance models appear to neglect organizational realities. In addition, they appear to neglect the interpersonal domain of teams and groups that is so central to many organizations today.

The particular CPS identified for a given system will vary considerably. For a team-based organization, the CPS may be a team; for a traditional organization, it may be department; for a community, it may be a neighborhood. Conversely, in a traditional organization, team performance may not be relevant if the performance system is built on department structure. Not all sub-systems will be critical to the accomplishment of the performance system's mission, so it may not be important for all sub-system performance be measured.

Individual Domain HRD and human resource professions in general have traditionally focused on the individual domain, reflecting the psychological roots of many in the field. The essence of HRD practice has been the improvement of individual human performance, particularly through expanded expertise, which is believed to result in enhanced organizational performance. While there are differing opinions as to how best to accomplish this, there is broad agreement about the need to focus on individual performance improvement, particularly through optimizing learning and expertise, incentives and consequences, feedback, information, resources, and working conditions required for the individual to function in the system.

Metrics for Performance Domains

The purpose of this article is not to provide a complete taxonomy of performance metrics as has been well done by others (Hronec, 1993, Kaplan & Norton, 1996). However, as noted earlier, some performance models confuse domains of performance with metrics. Thus, it is important to clarify the distinction between performance domains and metrics.

Kaplan and Norton (1996) suggest two categories of performance measures: outcomes and drivers. Unfortunately, they do not offer concise definitions of either. For our purposes, outcomes are measures of effectiveness or efficiency relative to core outputs of the system, sub-system, process or individual. The most typical are financial indicators (profit, ROI, etc.) and productivity measures (units of goods or services produced) and are often generic across companies. According to Kaplan and Norton, these measures tend to be lag indicators in that they reflect what has occurred or has been accomplished in relation to core outcomes.

Drivers measure elements of performance that are expected to sustain or increase system, sub-system, process, or individual ability and capacity to be more effective or efficient in the future. Thus, they are leading indicators of future outcomes and tend to be unique for particular business units. Together with outcome measures, they describe the hypothesized cause and effect relationships in the organization's strategy (Kaplan & Norton, 1996). Thus, drivers should predict future outcomes. For example, for a particular company, return on investment might be the appropriate outcome measure which might be driven by customer loyalty and on-time delivery, which in turn might be driven by employee learning so internal processes are optimized. In a state government department of revenue, an outcome measure might be percent of tax returns processed correctly within two weeks of receipt. A performance driver for that outcome might be number of quality improvement initiatives successfully implemented.

Thus, from this perspective, performance improvement experts who focus solely on actual outcomes, such as profit or units of work produced, are flawed in that they are likely to create short term improvement, but neglect aspects of the organization that will drive future performance outcomes. However, experts who focus solely on performance drivers such as learning or growth are equally flawed in that they fail to consider the actual outcomes. Only when outcomes and drivers are jointly considered will long-term performance change occur.

Table 2 presents some typical performance metrics for each of the four performance domains, classified as performance outcome measures or performance driver measures. It is important to note that some metrics could fall into either the outcome or driver category, depending on the nature of the performance system. Consider the case of "societal benefits." For a profit-oriented corporation, this might well be defined as a performance driver because it affects the long run opportunity for performance. For a government agency, this might be classified as a core performance outcome. Thus, the classification of a metric is dependent on the context of the specific performance system.

Table 2: Performance Domains and Typical Metrics

Domains of Performance	Typical Metrics for Measuring Performance Domains	
	Performance Outcomes	**Performance Drivers**
Mission	Economic Returns External metrics Market Share Profitability Mortality rate Poverty level	Societal benefits Innovation Knowledge capital Management/leadership Strategy Social responsibility
Process	Customers Quality Cost Time Product Features Market share (in product category)	Customer (needs satisfaction) Quality Innovation
Critical Performance Sub-system (team, dept., etc.)	Team effectiveness Structural sub-units performance Productivity (resource efficiency) Internal metrics Work outputs	Innovation Team/Group climate Management/leadership Ethical Performance
Individual	Productivity Work Output	Knowledge, Expertise Learning Renewal and growth Human Relations Ethical Performance Turnover Absenteeism

HRD as Whole System Improvement

This article has presented an integrated taxonomy of performance domains and metrics. The taxonomy meets the criteria outlined earlier of being parsimonious, situationally adaptable, embracing multiple organizational types, embracing multiple measures of performance, and integrating learning and development with performance. More importantly, the taxonomy points to the unique role that the discipline of HRD plays in organizational science: performance improvement of the whole system.

In most organizations there is no profession or discipline charged with responsibility for assessing, improving and monitoring performance as a whole system. This void is directly responsible for the proliferation of "quick fixes" and faddish improvement programs, most of which focus on only a single element or a subset of performance variables. Because HRD is grounded in systems theory and the whole systems perspective of organizations, it is the logical discipline to take responsibility for whole system performance improvements. This is not to suggest that HRD should control all factors affecting performance. Rather, HRD should be a gatekeeper for performance improvement, using its expertise to analyze performance problems, identify the best interventions, and evaluate outcomes.

Working across the system does not dismiss or reduce the importance of the individual. To the contrary, the performance perspective further enhances the individual in organizations by dismissing the common practice of trying to change the person before the system is changed, and by working to create healthy and effective organizational systems.

The "learning versus performance" debate centers on the importance of performance drivers versus outcomes. For example, adult educators view individual learning and development (a performance driver), as being the driver of all other domains and are critical of emphasis placed on outcomes. (Dirkx, 1997). Learning organization advocates place heavy emphasis on learning and development, and embrace multiple domains, but do not define expected performance outcomes. Because many HRD practitioners have developmental values and roots, the notion of performance outcomes and accountability for developmental processes is viewed with disdain and avoided.

The key point is this: these perspectives are both correct--and wrong at the same time. They are correct in that strategy, team interventions, quality, learning organization etc. may improve performance. They are wrong in that they will improve performance if and only if that aspect of the system is the one in need of intervention. Said differently, if the whole system is not considered, a good solution may be applied to the wrong problem. The classic case in our discipline is the pervasive practice of trying to fix system problems with individual learning. These views (and others) violate the fundamental principles of systems theory, which tell us that no one element of the system can be viewed separately from other elements

The research challenge around this issue is simple and huge: demonstrating that the performance framework unifies HRD, not divides it. The energy should not be in debates about learning OR performance and people VERSUS performance. Rather, the energy should be devoted to learning AND performance to integrate them in a comprehensive performance framework. If HRD is to be viewed in a strategic role, adding real value to accomplishing the mission of organizations and systems, it must embrace a performance perspective with learning and development as core drivers.

References

Bierema, L. L. (1997). Development of the individual leads to a more productive workplace. In R. Rowden (Ed.), Workplace learning: Debating five critical questions of theory and practice, pp. 21-28. San Francisco: Jossey-Bass.

Campbell, J. P. (1990). Modeling the performance prediction problem in industrial and organizational psychology. In M. Dunnette (Ed.) Handbook of Industrial and Organizational Psychology, pp. 678-732. Palo Alto, CA: Consulting Psychologists Press.

Cummings, T. G. & Worley, C. G. (1993). Organization development and change, 5th edition. Minneapolis/St. Paul: West Publishing.

Dirkx, J. M. (1997). Human resource development as adult education: Fostering the educative workplace. In R. Rowden (Ed.), Workplace learning: Debating five critical questions of theory and practice, pp. 41-47. San Francisco: Jossey-Bass.

Edvinsson, L. and Malone, M.S. (1997) Intellectual Capital: realizing your company's true value by finding its hidden brainpower, New York: Harper Collins, 1997.

Hammer, M. & Champy, J. (1993) Reengineering the corporation. New York: Harper Collins.

Holton, E. F. III (in press). Performance domains: Bounding the theory and practice. In R. Torraco (Ed.) Advances in Developing Human Resources, Berrett-Koehler.

Hronec, S.M. (1993) Vital Signs: Using quality time and cost performance measurements to chart your company's future, New York: American Management Association.

Juran, J. M. (1992). Juran on Quality by Design. New York: The Free Press.

Kaplan, R. S. & Norton, D. P. (1996). The balanced scorecard. Boston: Harvard Business School Press.

McGehee, W. & Thayer, P. W. (1961). Training in business and industry. New York: Wiley.

Porter, M.E. (1980) Competitive Strategy: Techniques for Analyzing Industries and Competitors, New York: The Free Press.

Rummler, G. & Brache, A. (1995). Improving performance: How to manage the white space on the organization chart. San Francisco: Jossey-Bass.

Sleezer, C. M. (1991). Developing and validating the performance analysis for training model. Human Resource Development Quarterly, 2(4), 355-372.

Swanson, D. L. (1995). Addressing a theoretical problem by reorienting the corporate social responsibility performance model. Academy of Management Review, 20, 43-64.

Swanson, R. A. & Arnold, D. E. (1997). The purpose of HRD is to improve performance. In R. Rowden (Ed.), Workplace learning: Debating five critical questions of theory and practice, pp. 13-19. San Francisco: Jossey-Bass.

Swanson, R. A. (1995). Human Resource Development: Performance is Key. Human Resource Development Quarterly, 6 (2), 207-213.

Swanson, R. A. (1994). Analysis for improving performance: Tools for diagnosing organizations and documenting workplace expertise. San Francisco: Berrett-Koehler.

Watkins, K., & Marsick, V. (1995). The Case for Learning in E.F. Holton (ed.). Academy of Human Resource Development 1995 Conference Proceedings. Austin, TX. AHRD.

Leadership and Culture: Work-Related Values and Leadership Styles Among U.S. and German Employees

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This survey-based study examined within- and between-country differences in work-related values and leadership styles of U.S. and German telecommunication employee. The results showed country- and job level effects for cultural values and leadership styles, but only weak intercorrelation between the two constructs. The study points to patterns of work-related values different from those predicted by earlier research and identifies developmental needs in leadership among first line supervisors

Despite the rapidly increasing globalization of business and industry, there is a dearth of cross-national and cross-cultural comparative social science research to answer the questions faced by organizations operating in increasingly complex and fast-changing international and multi-cultural environments and to provide guidance for practice. In the field of International Human Resource Development (IHRD) this lack is especially keenly felt (e.g.: Hansen & Brooks, 1994; McLean, 1991; Peterson, 1997), but also in the related fields of Human Resource Management (e.g.: Brewster, Tregaskis, Hegewich, & Mayne, 1996) and Organizational Behavior (e.g.: Lytle, Brett, Barsness, Tinsely, & Janssens, 1995). Among the reasons for to this paucity are the lack of global constructs and theories, the complexity of measuring country-level effects, and difficulties of research design.

This comparative, cross-national, and cross-cultural study expands the body of knowledge of IHRD by testing a series of hypotheses related to leadership and work-related values of U.S. and German telecommunication employees of a global organization. The choice of these two countries was dictated by the strong economic, historical, political, and cultural ties between these two nations and the researcher's familiarity with and interest in both nations. Moreover, there has been a great degree of cross-fertilization of ideas related to each other's HRD-related practices in areas ranging from general and higher education, to apprenticeship training, labor-management relations, and work-related policies and practices.

The study focused on three distinct research questions: (1) the degree of variance of cultural, work-related norms and values both within and between the two countries; (2) the level of variance in leadership styles and behaviors within and between the two countries; and (3) the intercorrelation of work-related values and leadership styles. The research design allowed for three levels of analysis for each problem: (1) country-level comparisons of culture and leadership, comparing the two U.S. sites and the German site; (2) within-country comparisons of the two US sites comparing the sites located in the Mid-Western and the Eastern parts of the country; and (3) within-site comparisons of three levels of job categories at each of the three sites. The results provided a comprehensive set of answers related to the differences in work-related values and leadership styles and their intercorrelation by nation, by site within the U.S., and by job category within each site.

Summary of Previous Research

The concept of culture is central to the study of groups and nations and has been used in IHRD and international management to measure country- and group-level effects that can discriminate between countries and groups and thus help explain variance in the behavior or organizations and people. Culture has been conceptualized as a complex web of norms, values, assumptions, attitudes, and beliefs that are characteristic of a particular group and are reinforced and perpetuated through socialization, training, rewards, and sanctions (Lytle et al., 1995). Culture constitutes the successful attempt to adapt to the external environment, it presents the group's strategy for survival (Triandis, 1994), and has been described as the "software of the mind" (Hofstede, 1991,

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p. 3). Researchers have described a wide variety of categories of cultural dimensions (see Lytle et al., 1995), and it is generally accepted that individuals can belong to any number of social groups each with its own set of norms and values (Kostova, 1997).

Among the most popular frameworks for studying international culture has been that of Geert Hofstede who published a ground-breaking study of some 116,000 IBM employees in 40 countries surveyed in 1968 and 1972 (Hofstede, 1980) and used factor-analytic techniques to arrive at four dimensions of culture as related to work organizations: power distance, individualism, masculinity, and uncertainty avoidance. Hofstede later (Hofstede & Bond, 1989) added a fifth dimension, long-term orientation, which is a part of Confucian Dynamism. The framework has been applied and replicated over 60 times and the country differences predicted by Hofstede have been by and large confirmed (Søndergaard, 1994).

The scholarly and practitioner literatures, by and large, have treated the country scores published by Hofstede (1980) from research with one company in the late 1960s and early 1970s as valid today and as generalizable to the entire U.S. and Germany, despite the fact that most replication studies were conducted in other countries. Given the single data point presented by Hofstede's work and the dramatic political changes in both countries over the past 30 years, a replication of the original research, as conducted in this study, was warranted.

The popularity of Hofstede's work has further led to the oversight of possible within-country differences in work-related values, for instance by region or by position within an organization. While Hofstede (1980) acknowledged the possibility that the scores of the original dimensions of culture were artifacts of the sample, little research has been conducted to test the level of homogeneity of work-related values in other samples. This study accomplished this task by comparing two U.S. sites to one another and each of the three sites by job category and thus presents an extension of the original work.

Although several hundred definitions of leadership exist (Stogdill 1990), more recently the focus of research has shifted to a new class of outstanding leadership theories (House & Podsakoff, 1994) that takes as its core idea the concept of charisma, defined early in this century by German sociologist Weber (1924/1947) as the leader's authority based on "devotion...[exemplary character [and] of the normative patterns or order revealed by him (sic)" (p. 328). Based on this notion, Bass (1985) and colleagues developed a theory of transformational leadership, distinguishing between transformational leadership (and its components charisma, intellectual stimulation, individual consideration, and inspirational motivation); transactional leadership (contingent reward and management-by-exception); and laissez-faire (or non-) leadership. Transformational leadership is said to exert an augmentation effect, that is to add to the levels of productivity, satisfaction, and effectiveness associated with transformational leadership alone (Avolio, Bass, and Jung, 1995). The factor structure of the theory has been confirmed in many replications and the instrument refined and translated into a number of languages.

None of the replications, however, addressed possible differences in leadership style by site, by population within site, or by country. Focusing on single-country, single-site research settings, the theory has not been tested in light of possible differences in leadership styles by level within the organization or by region, and scant attention has been paid to differences in transformational leadership style by country. This study accomplished this by testing for differences in leadership styles within and between sites and countries.

A third purpose for the study was to empirically test whether specific work-related values were related to specific leadership styles. While the topic of culture and leadership has received much theoretical attention in the literature (e.g.: Hofstede, 1980; Schein, 1985; Triandis, 1994), little empirical research exists relating specific cultural values to specific styles of transformational or transactional leadership.

Research Setting, Design, and Methodology

The study was conducted using a causal-comparative, ex-post-facto, one-shot survey design. The population consisted of the 5,400 employees at three manufacturing sites of a Fortune 500 multi-national telecommunication organization headquartered in the U.S. The three sites were located in Ohio (OH), New Jersey (NJ), and Nürnberg/Germany (NU) and reported to the same U.S.- based Vice President of Operations. All three sites were involved in manufacturing telecommunication transmission equipment, had like technologies and work processes, and identical work policies and procedures. The sites differed in size and age, the OH site was the largest and oldest, the NJ site the smallest and youngest. In consultation with representatives at the three sites, a survey was administered to a stratified, non-proportional, random sample of the population, using Hofstede's 1994 version of the Value Survey Module, VSM 94 (Hofstede, n.d.), Bass and Avolio's Multifactor Leadership Questionnaire, MLQ5x (Avolio, Bass, and Jung, 1995),and a series of standard demographic questions. Both the VSM 94 and the MLQ5x were obtained from the authors in English and German and given to the participants in their native language. The survey was administered to 3,540 employees (66% of population) and yielded an overall response rate of 53% (Table 1). The error limit associated with this response is less than plus/minus 3 percent overall and ranges from plus/minus 2% to plus/minus 10% for specific subpopulations. Chi-square tests of demographic information of respondents with information obtained from the sites' personnel information system showed that survey respondents were representative of the plant population with the exception of the overrepresentation of women in the sample. In addition to the survey, a series of open-ended interviews were conducted at each site to obtain contextual information. The data were analyzed and feedback sessions conducted at each of the three sites with managers, engineers, and production employees. The feedback sessions resulted in action plans at each site to improve leadership styles and collaboration within and among the three sites.

Table 1
Sample Sizes, Responses and Response Rates by Job Category and Location

Site/Job Category	Ohio		New Jersey		Nürnberg		Total	
	Initial Sample	Response	Initial Sample	Response	Initial Sample	Response	Initial Sample	Response
Production Employees	939	196 (21%)	255	122 (48%)	745	528 (71%)	1,939	846 (44%)
Engineers	305	131 (43%)	134	34 (25%)	800	468 (59%)	1,239	633 (51%)
Managers	186	105 (56%)	23	6 (26%)	150	53 (35%)	359	164 (46%)
Invalid/No Answers		6 (<1%)		25 (6%)		198 (12%)		229 (6%)
Total	1,430	438 (31%)	412	187 (45%)	1,695	1247 (74%)	3,537	1872 (53%)

Note: Percentages based on Initial Sample Size Row Totals

Results

Demographic information collected from the 1,872 survey respondents revealed differences by site and by job category for gender, age, level of education, union membership, and tenure in the current job category. The "typical" survey respondent was male, between 30 and 39 years of age, had a high school diploma with on-the-job training or a two-year technical degree, was unionized, and had been in the present job category longer than 10 years. This profile of the typical participant reflects the comparatively large percentage of production employees, the demographic profiles of engineers and mangers differ (higher level of education, shorter job tenure, and no union membership.) Because the New Jersey plant had been built less than 5 years ago, its population was the youngest in terms of age and job tenure. The overall education level at the Nürnberg plant was higher than at the two U.S. sites because of its larger percentage of engineers and the fact that the lowest academic degree in Germany is comparable to the Master's degree in the U.S.

The scores for leadership styles and work-related values were calculated based on the formulae provided by the test authors; test statistics for the leadership scales revealed ranges of the mean scores and standard deviations similar to those attained in previous studies, with measures of internal consistency (Chronbach's alpha) ranging from α = .68 to α = .83, meeting the generally expected level of α = .7. Means and standard deviations for the culture dimensions varied from previously published studies, and Chronbach alphas were also above a = .7 for four of the five dimensions. The Power Distance scales yielded only an only marginally acceptable alpha scores (α = .56) even after one of the four scale items was deleted from the analysis. As predicted by the theory, the four transformational leadership scales were highly and positively intercorrelated, while transactional and the non-leadership factors were negatively correlated with transformation leadership. There were only marginal ($r < .2$) correlations between the cultural dimensions, suggesting the independence of the dimensions from one another.

Differences in cultural values and leadership styles Because demographic variables were shown to have main effects on leadership and culture, they were statistically controlled for in the Analyses of Covariance (ANCOVA) models used to test for differences in these constructs within, among, and between sites. Each ANCOVA was conducted three times: (1) by merging the two U.S. sites and comparing them to the German site to test for country effects; (2) by comparing the New Jersey and Ohio sites to test for regional, within-country effects; and (3) for each of the three sites by job category to test for job category effects. Follow-up pairwise tests were conducted using the Bonferroni procedure.

The study found country-level effects for three of the five culture dimensions: Power Distance (Germany higher), Individualism (U.S. higher), and Masculinity (U.S. higher). There were no differences in the levels of Uncertainty Avoidance or Long-term Orientation (Table 2). These findings depart from the results reported in Hofstede's (1980) original research where the U.S. sample had scored higher in Power Distance and where the differences in the two countries' scores for Masculinity and Uncertainty Avoidance had been much greater. The country-level analyses also showed that production employees and engineers in the two countries differed, while U.S. and German managers' scores did not.

Table 2

Analysis of Covariance for Culture Dimensions (N=1,892); Hofstede's (1980) Scores in (Brackets)

	M		F
Dimension	U.S.	Germ.	
Power Distance	29.05 (40)	35.21 (35)	13.10***
Individualism	79.07 (91)	53.18 (67)	165.2***
Masculinity	10.51 (62)	-19.96 (66)	52.05***
Uncertainty Avoidance	102.55 (46)	105.06 (65)	2.15 ns
Long-term Orientation	43.00 (29)	43.84 (31)	.07 ns

Levels of Significance: *** .001; ** .01; * .05

When comparing culture and leadership scores of the two U.S. sites, testing hypotheses related to regional (within the U.S.) differences, the results showed differences in Power Distance (Ohio site higher) for production employees and engineers. None of the other culture dimension scores differed in the ANCOVA model.

The study also tested for within-site differences in work-related values. Here, the results differed by site: At the New Jersey plant, no differences were found for any of the five culture dimensions among managers, engineers, and production employees. At the Ohio site, managers scored lower on Power Distance and Uncertainty Avoidance than the rest of the organization, while production employees scored the lowest on individualism (Table 3).

Table 3
Comparison of Within-Site Difference in Culture Dimensions: Ohio (N=438)

Dimension	M			F	Pairwise Comparisons
	Production Employees	Engineers	Managers		
PDI	43.73	36.40	19.55	5.86**	E>M;P>M
IND	66.14	88.35	93.17	67.07***	E>P;M>P
MAS	3.41	10.87	1.29	.47 ns	-
UAI	118.94	102.32	78.71	8.67***	E>M;P>M
LTO	43.48	46.68	47.10	.06 ns	-

PDI: Power Distance, IND: Individualism; MAS: Masculinity; UAI: Uncertainty Avoidance;
LTO: Long-term Orientation; Significance Levels: *** .001; ** .01; * .05
P: Production Employees, E: Engineers, M: Managers

At the German site (Table 4) , managers also scored lower on the Uncertainty Avoidance scale, and there were differences in the level of Individualism (production employees lower than engineers), Masculinity (production employees higher than engineers), and Long-term Orientation (managers higher than production staff).

Table 4
Comparisons of Within-Site Culture Dimensions by Job Category: Nürnberg (N=1,247)

Dimension	M			F	Pairwise Comparisons
	Production Employees	Engineers	Managers		
PDI	34.49	33.53	36.37	.04 ns	—
IND	46.44	61.94	56.15	4.68***	E>P
MAS	-10.61	-34.20	-14.71	6.48**	P>E
UAI	100.68	108.45	76.40	8.51***	P>M; E>M
LTO	40.68	45.80	60.67	4.04**	M>P

PDI: Power Distance, IND: Individualism; MAS: Masculinity; UAI: Uncertainty Avoidance;
LTO: Long-term Orientation; Significance Levels: *** .001;** .01; * .05
P: Production Employees, E: Engineers, M: Managers

Country-level effects were also found for the transformational leadership dimensions of Charisma and Inspirational Motivation (U.S. higher), as well as for Intellectual Stimulation (Germany higher). These differences were found among production employees and engineers, but not among mangers.

When comparing leadership styles of the two U.S. sites, the only differences were between NJ engineers who scored higher on Management-by-Exception than their counterparts at the OH site, and NJ managers who scored higher on Management-by-Excpetion and Laissez-Faire Leadership than their OH peers.

With respect to leadership, the NJ site yielded a homogeneous picture and no differences were found among the three employee groups. At the Ohio (Table 5) and the German (Table 6) sites, managers scored higher on transformational leadership styles than did engineers and production employees.

Table 5
Comparison of Within-Site Differences in Leadership: Ohio (N=432)

	M			F	Pairwise
	Product.Employ.	Engineer	Managers		Comparisons
TFL	2.22	2.37	2.44	4.15*	M>P
CHA	2.31	2.55	2.72	3.25*	M>P
MOT	2.54	2.72	2.79	.81 ns	
STM	2.05	2.18	2.62	8.36***	M>P;M>E
CONS	1.99	2.17	2.44	3.83*	M>P
TAL	1.79	1.63	1.67	1.08 ns	
REW	2.22	2.24	2.44	1.32 ns	
MBE	1.57	1.32	1.30	2.67 ns	
LFL	1.06	.87	.76	2.35 ns	

Table 6
Comparison of Within-Site Differences in Leadership: Nürnberg (N=1,247)

	M			F	Pairwise
	Product. Employ.	Engineers	Managers		Comparisons
TFL	2.31	2.14	2.39	3.32*	M>E
CHA	2.31	2.05	2.40	4.61*	P>E; M>E
MOT	2.40	2.11	2.42	5.63**	P>E; M>E
STM	2.40	2.26	2.43	.99 ns	—
CONS	2.21	2.11	2.26	.89 ns	—
TAL	1.73	1.64	1.65	.40 ns	—
REW	2.32	2.07	2.27	1.15 ns	—
MBE	1.53	1.48	1.39	1.32 ns	—
LFL	.97	1.05	1.01	.06 ns	

Significance Levels: *** .001; ** .01; * .05
TFL: Transformational Leadership; CHA: Charisma; MOT: Inspirational Motivation
STM: Intellectual Stimulation; CONS: Individual Consideration; TAL: Transactional Leadership; REW: Contingent Reward; MBE: Management-by-Exception; LFL: Laissez-faire Leadership; P: Production Employees, E: Engineers, M: Managers.

Correlational Analyses of Culture and Leadership Partial correlation analyses, controlling for demographic variables, were conducted to measure the relationship between cultural dimensions and leadership. As before, these analyses were conducted at the country, regional, and site levels. Overall, the analyses failed to show significant relationships between the two constructs. Where significant, partial correlation coefficients rarely exceeded r = .2, suggesting spurious relationships and artifacts of the sample size. Low- to medium correlations were, however, found for the U.S. engineers (both U.S. sites combined) where Power Distance and transformational leadership dimensions were positively correlated (r's ranging from .31 to .41). Correlations of similar size were also found at the German plant managers for the relationships between Individualism and Transactional Reward and Intellectual Stimulation and Long-term Orientation.

These results show a generally limited intercorrelation between culture and leadership, except for U.S. engineers and German managers.

Implications for Research and Practice

This study has implications for practice at two levels. For the organization, it yielded a fine-grained analysis of work-related values and leadership styles. As the three plants are moving toward closer cooperation with one another, these measurements of culture and leadership gave voice to areas of similarities and differences, resulted in action planning to reduce the high levels of uncertainty avoidance and to raise the use of transformational styles of leadership, and set a baseline for measuring progress over time.

Although the study did not generalize beyond the walls of the three sites, it has implications for HRD professionals working within the U.S. and internationally. First, as this study shows, work-related values differ by country, by region, and by level within the organization. Further, these differences change over time. The study of culture is in its infancy; assuming that Hofstede's results, or those of any other cross-cultural study (including this one) can apply to an untested population appears, therefore, as a dangerous and unwarranted overgeneralization. In working with different groups, whether nationally or internationally, where work related values are of importance, HRD professionals are well advised to conduct measurements like the ones used in this study in order to tailor the intervention to their specific cultures. A similar argument appears warranted for expatriate training: given the amount of within-country variance of culture, an assessment of the specific work-related values of the host culture will provide the most valid and reliable information.

This study found a predominance of transactional leadership styles among production employees. Given the clear link between transformational leadership and increased performance and quality of work life, this finding, if borne out in other settings, suggests a developmental agenda for first-line supervisors, team leaders, and those in charge of production employees who, historically, have received the least amount of formal training and development.

The study also has clear implications for theory and points to future research needs. In this study, work-related values were neither uniformly distributed nor shared within the two countries, raising questions about the utility of the construct of national culture in multi-cultural societies like the U.S. and Germany. Further, one of Hofstede's measures returned unacceptably low internal reliability measures, calling into questions the validity of the underlying construct.

Related to leadership theory, the study suggests the existence of heterogeneity of leadership styles within the same organization, with clearly lower levels of transformational styles among German employees and among U.S. and German production workers. Finally, the moderate-size correlation between transformational leadership and high power distance among German engineers suggests a possible limitation to the extent to which transformational leadership can be implemented in that group. Despite the general trend toward more participatory and egalitarian working relationships, leadership through a strong vision and identification with the leaders might not be accepted in all situations.

The agenda for future research suggested by this study focuses on the need to more clearly define the culture construct and develop reliable and valid measures, to better understand the limitation that work-related values might place on transformational leadership, and to investigate the reasons for the low levels of transformational leadership among production employees.

References

Avolio, B. J., Bass, B. M., & Jung, D. I. (1995). MLQ: Multifactor leadership questionnaire: Technical report. Palo Alto, CA: Mind Garden.

Avolio, B. J., Bass, B. M., & Jung, D. I. (1995). MLQ: Multifactor leadership questionnaire: Technical report. Palo Alto, CA: Mind Garden.

Brewster, C., Tregaskis, O., Hegewisch, A, & Mayne, L. (1996). Comparative research in human resource management: A review and example. The International Journal of Human Resource Management, 7(3), 585-604.

Hansen, K. D., & Brook, A. K. (1994). A review of cross-cultural research on human resource development. Human Resource Development Quarterly, 5(1), 55-74.

Hofstede, G. (1980). Motivation, leadership, and organization: Do American theories apply abroad? Organizational Dynamics, 42-63.

Hofstede, G. (1991). Cultures and organizations: Softwares of the mind: Intercultural cooperation and its importance for survival. New York: McGraw-Hill.

Hofstede, G. (n. d.). Values Survey Module 1994: Manual. University of Limburg, The Netherlands: Institute for Research on Intercultural Cooperation.

Hofstede, G., & Bond, M. B. (1984). Hofstede's culture dimensions: An independent validation using Rokeach's value survey. Journal of Cross-Cultural Psychology, 15(4), 417-433.

House, R. J., & Podsakoff, P. M. (1994). Leadership effectiveness: Past perspectives and future directions for research. In J. Greenberg (Ed.), Organizational Behavior: The State of the Science (pp. 45-82). Hillsdale, NJ: Lawrence Earlbaum Associates.

Kostova, T. (1997). Country institutional profiles: Concept and measurement. Best Paper Proceedings of the 57th Annual Meeting of the Academy of Management, Boston, MA, 180 - 184.

Lytle, A. L., Brett, J. M, Barsness, Z. I., Tinsely, C. H., & Janssens, M. (1995). A paradigm for confirmatory cross-cultural research in organizational behavior. Research in organizational behavior, 17, 167-214. Greenwich, CT: JAI Press

McLean, G. N. (1991). Research needs in international HRD. In R. L. Jacobs (Ed.), Organizational issues and human resource development research (pp. 39-52). Columbus, OH: University Council for Research in Human Resource Development and Ohio State University.

Peterson, L. A. (1997). International HRD: What we know and don't know. Human Resource Development Quarterly, 8(1), 63-80.

Schein, E. H. (1985). Organizational culture and leadership. San Francisco: Jossey-Bass.

Søndergaard, M. (1994). Research notes: Hofstede's consequences: A study of reviews, citations, and replications. Organization Studies, 15(3), 447-456.

Stogdill, R. M. (1990). Stogdill's handbook of leadership. New York: Free.

Triandis, H. C. (1993). The contingency model in cross-cultural perspective. In M. M. Chemers & R. Ayman (Eds.), Leadership theory and research: Perspectives and directions (pp. 167-188). San Diego, CA: Academic.

Weber, M. (1947). The theory of social and economic organization. (A. M. Henderson & T. Parsons, Trans.). New York : Free. (Original work published in 1924).

Making the Tacit Explicit: Constructing Meaning from Learning Experiences of Senior Managers of Romanian Private Companies in the Transition to a Free-Market Economy

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This paper provides a preliminary report of a study on managerial learning. The critical incident technique was used to examine learning experiences of senior managers of small Romanian private companies wich enabled them to lead successfully in the transition to a free-market economy. The purpose of the study was to determine what triggered their learning, what learning strategies they used and how they make meaning of their learning experiences. The study, preliminary findings and implications for HRD are described.

In the politically turmoiled and economically destroyed former Eastern Bloc countries, a free-market order is viewed as a quick and efficient way towards recovery. According to Nagy (1992), the countries of this region are faced with two enormous tasks. The first one - the creation of a new political regime incorporating a multiparty system and parliamentary democracy - is in the process of completion; while the second one - the transition from a centrally planned economy to a free-market economy - is far from being completed.

As Sachs (1990, 1990a, 1991) has pointed out, economic liberalization, macroeconomic stabilization, and privatization are necessary conditions for a transition to a free-market economy. Nevertheless, they are not sufficient. It is not enough to create the mechanism and institutions of a market economy if economic culture and entrepreneurial thinking are lacking. Since individual human decision-makers are the moving force behind all economic actions, the sufficiency condition for the transition will be satisfied by the development of a managerial professional class.

According to Nagy (1992) and Cseh (1992), management development should be regarded as an integral and very important part of the historical changes that are now taking place in the former Eastern Bloc countries. Mugur Isarescu, the governor of the central bank in Romania, likes to attribute the country's improving economic performance to what he describes as the "spontaneous restructuring" of the economy as business people and managers of state and private firms learn to adapt to market mechanisms (Anonymous, 1995). This study is rooted in this spontaneous restructuring. Leading that restructuring is Romania's still small, but fast growing, private sector. Its share of gross domestic product (GDP) has grown from nil in 1989 to 35% in 1994, when it accounted for an estimated 51% of employment. Most of these firms are small to mid-size and represent the agricultural, trade, and service sectors (Cseh, 1992; Anonymous, 1995). As Anton, Danciu, and Mitu (1996) pointed out, the profit made by the private sector in 1993 was 4.6 times larger than that of the state sector. They found that "the private sector proved it was capable of absorbing a large share of the labor force made available by public enterprises and of offering equal or even higher salaries to its employees. Private owners are an economic force that is proving to have better skills in administering their assets." (p.72).

Thus, a crucial role in the economic restructuring is played by the senior managers of these small and mid-size companies who are learning to adapt to market mechanisms and to cope with the radical changes characterizing the transitional period from a centrally planned economy to a free-market economy in Romania. Although these managers are now expected to compete in a new market oriented environment, a review of the current literature has revealed that insufficient attention has been given to the managerial concerns implied in the transition process to a free-market economy in Romania (Nicolescu, 1992; Cseh, 1992). In order to develop innovative management development approaches to help managers acquire the needed skills to manage in this transitional period, it is imperative to understand how managers learn what they need to know in order to successfully run

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their businesses in this new environment. No evidence was found of studies of this nature in Romania.

Theoretical Framework

The managerial learning literature shows that learning outside of a formal classroom setting has great importance in managerial learning. Learning from experience, trial and error, social learning, self-directed learning were just a few of the modalities surfacing in the reviewed studies (Burgoyne & Hodgson, 1983; Lombardo, 1985; Zemke, 1985; Stuart, 1986; Akin, 1987; McCall, Lombardo, & Morrison, 1988; Dechant, 1989; Stuart, 1989; Marsick & Watkins, 1990; Verlander, 1992; Kops, 1993; Young, 1994; Burgoyne, 1995).

In the wake of all the above evidence, the main assumption of this study is that Romanian senior managers of private companies learn their jobs primarily through informal, incidental means. The theoretical framework of this study is therefore based on Marsick and Watkins's (1990, 1996), Watkins and Marsick's (1992), theory of informal and incidental learning in the workplace. Informed by their research, the authors noted that most learning in the workplace takes place either on the job, in informal settings, or coincident to other work tasks.

Purpose of the Study and Research Questions

The purpose of this study is to examine critical learning experiences of senior managers of private companies in Romania, which enable them to lead successfully in the transition to a free-market economy, in order to determine what triggered their learning, what strategies they used, and how they make meaning of their learning experiences. In order to attain the purpose of the study, the following research questions will be investigated:

1. What triggered the managers' engagement in the learning activity?
2. How do senior managers of small Romanian private companies learn what they need to know to run their businesses successfully in the new free-market economy?
3. How do managers make meaning of their learning experiences?

Methodology

In studying managerial learning in the transition to a free-market economy in Romania, a qualitative research methodology has been selected. The study is the first of its kind in Romania which explains its exploratory, descriptive nature. The critical incident technique (CIT), which according to Yukl (1981) is especially useful in exploratory research designs to examine very specific, situational aspects of managerial behavior, has been selected as the research method for this study. This technique was applied in this study through in-depth interviews of selected senior managers of successful Romanian private companies.

Population and Sample. The target population selected for this study is that of senior managers of successful small (2-99 employees) Romanian private companies. To select the sample for this study, the top lists of successful private companies of three Romanian counties, Bucharest, and the national list were consulted. These lists are published by the Chamber of Commerce of each county and of Bucharest and a top national list is also compiled and published. Senior managers of small private Romanian companies from the top lists with at least three years of existence were then selected for this study using the snowball or chain sampling technique. Each manager was asked to describe at least three critical incidents according to an interview guide which they received at the time they agreed to participate in the study.

The sample size was determined based primarily on informational considerations (to obtain in-depth description through information rich critical incidents) , and secondarily by the time (limited by the doctoral dissertation requirements) and resources (as the study is funded by the researcher) available to the researcher. According to Patton (1990) "The validity, meaningfulness, and insights generated from qualitative inquiry have more to do with the information-richness of the cases selected and the observational/analytical capabilities of the researcher than with the sample size" (p. 185). Based on these considerations and informed by the literature (where the number of incidents varies from tens to thousands depending upon the depth of the study), the researcher decided on a sample size of fifteen to twenty managers from three counties of the region called Transylvania and from Bucharest, the capital of Romania and its surroundings. These two regions have been selected because the researcher was born and grew up in Transylvania, worked and has an extensive network of relationships in both regions. Managers were selected to represent both genders and the nationalities (Hungarian and Romanian) specific to these regions. Eighteen managers were selected by the researcher with the expectation of generating 40 to 60 critical incidents (the unit of analysis) which is a relevant sample in the critical incident literature.

Data Collection Procedures. The researcher traveled to Romania to identify the participants in the study and to gather data. In order to prepare the design for this study, the researcher had two in-depth telephone conversations from the United States with a senior manager of a joint venture in Transylvania and a senior manager of a private Romanian company in Bucharest. During these conversations, the researcher discussed the topic of her research with the two managers, the sampling process, the data gathering process, and the actual economic situation in Romania. The managers showed enthusiasm and understanding for the topic and offered their help in further networking and sample selection. The manager from Bucharest agreed to participate in a pilot study and a telephone interview with this manager was conducted for this purpose.

All interviews were tape recorded and field notes and memos were taken by the researcher immediately after each interview. The recorded interviews were transcribed and translated by the researcher who is a native Romanian of Hungarian nationality, speaking both languages at mother tongue level. She is multilingual, has learned English in childhood, and has used it extensively in her work by translating, interpreting, and tutoring from English to Romanian and Hungarian, and vice-versa. Although it is impossible to achieve a word-for-word translation, the researcher made an attempt to keep the rendering as consistent as possible. In order to counteract the above mentioned problems characterizing any translation, parts of the translated interviews were re-translated by two persons who are native Romanian and speak fluent English. Adjustments were made when necessary.

Data Analysis. The data analysis process when using the CIT approach involves careful examination of the data, and sorting of the critical incidents into categories and subcategories according to similarities in the reported experiences (Flanagan, 1954; Yukl, 1981; Query & Kreps, 1993). The researcher used the content analysis approach for this purpose.

Patton (1990) defined content analysis as "the process of identifying, coding, and categorizing the primary patterns in the data" (p. 381). According to the author, the first step in content analysis is coding notes and then classifying the content of the data by organizing/categorizing the data into topics and files. During this process which can be compared to constructing an index for a book or labels for a file system, the researcher will read through the transcripts making comments in the margins about the topic and giving a label to that part of data. In this way the data will be coded into a classification scheme. The importance of this process is presented by the author who quoting George Sand's words in her Nouvelles Lettres d'un Voyageur (1869) writes: 'Classification is Ariadne's clue through the labyrinth of nature' (p.382).

Describing the process of content analysis, Weber (1985) also noted that the central idea in the process is that the many words of the text are classified into much fewer categories. Each category may consist of one, several, or many words. Words, phrase, or other units of text having similar meanings will be classified in the same category. Thus, the main issues which have to be addressed are the design and implementation of a coding scheme and the development of the coding categories. According to the author, during the process of defining the categories the researcher should decide whether or not the categories are to be mutually exclusive and how narrow or broad the categories are to be.

Based on the theoretical framework of this study and on the in-depth knowledge of the data (after transcribing and translating it), the researcher began the preliminary sorting of the data in the following four broad and mutually exclusive categories: Triggers, Learning Strategies, What Was Learned and Influence on Learning of the Transition to Free-Market Economy. This was accomplished by the researcher reading through the translated transcripts, highlighting phrases and making comments in the margins about their meaning in connection with the above categories. After this process all the phrases pertaining to each of the categories were extracted (cut and paste) and grouped under their specific categories. The next process was the open coding of the data inside each of the categories to obtain specific themes through close examination of the data.

According to Weber (1985), after coding all the text and the text is classified, "the reliability of human coders should be assessed" (p.24). Intercoder reliability is suggested to assess the extent to which content classification produces the same results when the same text is coded by more than one coder. This was achieved in this study by the researcher working closely with her major professor and an American resident with eight years of managerial experience in Romania who coded parts of the data and helped clarify the emergent themes.

Findings

This section presents the preliminary results of the content analysis method used to examine the critical learning experiences of senior managers of small, successful Romanian companies. Wagner and Sternberg (1985) propose that tacit knowledge (knowledge that usually is not openly expressed or taught) plays an important role in intellectual competence in real-world pursuits. According to the authors tacit knowledge is a specific component of intelligent behavior that is important for occupational success, which is informal rather than formal and practical rather than academic. It is the tacit attributions, beliefs, and assumptions which make up the informal and incidental learning. In the following, a number of themes emerged from analyzing the managers meaning making around their learning in the transition to a free-market economy are presented.

Triggers. As the result of open coding inside of this category several themes emerged which are best described by the managers' quotations. One of the main themes to which managers attributed their learning experiences were related to the business environment (e.g. financial instability, lack of resources, new business culture). As one of the participants recalled "It was a time of crisis, the inflation, and we had to design a strategy against the devaluation of our assets,..." [P9, p2] Another participant remembered: "I could have lost easily all my money because there was nobody there to help me, or maybe the problem was that we were very poorly prepared from the point of view of information on how to proceed or how to conduct a business arrangement. We didn't have the bases or the places from where we can get information, we didn't know how to begin something, we didn't have this business culture and the preparation for entering into a contract and getting it through." [P5, p2]

Another theme is related to the relationship with the customer/supplier (e.g. difficulties in doing business based on a contract; dealing with customers who do not pay and with suppliers who do not deliver in time). Some of these issues are portrayed in the following quotes: "We finished the work, made the calculations for the price, and they don't want to pay us." [P8, p5] "We manufactured and sent equipments to one of our trustworthy customers and after 60 days we still didn't receive any money." [P2, p3]

Personal integrity and trust was another emerging theme. One of the participants was still shaken when he remembered how "it happened in Bucharest that the person whom we trusted in managing that branch ripped us off causing big losses for the company." [P7, p9] Another participant who continued the same business in which he was in with some partners before recalled: "We could not agree on investments, I was by myself here, the other partner was from Hungary, and the third one from another city, and they weren't willing to share profits anymore.... What caused the instability for me, was the split from the other company, and the settlements with my old partners." [P9, p1]

Lack of relevant courses was mentioned by a few participants. Remembering about his experience with formal education one of the participants recounted: "So, the courses did not work because Romania has a specific market economy, thus not a mature market economy. I went in vain to a course which explained how to calculate prices because you cannot use the same method here. Or they explained how to deal with the customer. It was also in vain because here things are completely different. Those methods are working in the capitalist market economy, but not in the post-communist, half state owned, half private one. So far, nobody designed a course to explain to me how should I put myself in the shoes of a state employee who is not interested in anything besides what to buy for his/her children tomorrow; why should he/she be interested in selling more? These situations were not woven into courses. Only life could teach you this, so, about how should you bargain, how should you talk, how should you give bribes, tips, pocket money if you want to have an entrance somewhere, unfortunately this is like this. There is no course for this. There are no courses for management designed to show me how should I buy raw materials or how it would be possible. So, if in one place you cannot find them you have to run to the other place. In the west there is no such situations that there are no raw materials. You call and somebody will bring them to you. While here I have to go and beg the director to produce a little bit from that raw material, "no", then I go to the other, then scandal. So, for these illnesses the course do not offer medication." [P7, p12-13]

Learning Strategies. The main themes under this category were the following: Learning from experience (e.g. from others' and own mistakes, trail and error - "...your improvement comes only by experiencing the failures. [P2, p5]); learning from others (e.g. family, friends, peers, subject experts - "I'm not ashamed to ask questions and I have a lot of friends, and also my father is a constructor and I talk with him about a lot of problems and I ask for his advise." [P6, p8]; "There is a well known professor in Bucharest, who teaches oil manufacturing. And I called him, I made an appointment with him,..".[P9, p5]; "And during these control actions we learned a lot from them [control authorities], how to do it right next time, or which are the right ways to avoid the fines.... We had people who controlled and fined us of course, but they in the same time explained us how to do things right, so next time we knew not to make the same mistake again. With some of them we kept in touch, and they gave us advise in many situations." [P8, p4-5]); networking ("Then I had a classmate in this small western town, we were in highschool together and I told him 'you are there don't you want to take this job, or help me find somebody.' He told me that he can not take it, but he knows somebody who might." [P7, p12]); problem solving based on previous life experiences (" So, generally speaking I tried to rely on my own power and to solve my problems myself." [P5, p3]; "...from what I have seen with my own eyes during my everyday walks in our city and travels in the country when I got a feel for people's points of view and what is going on." [P5, p5]), field trips, reading, market research and some formal learning (courses, lectures).

What Was Learned. The managers reported on learning about the business culture of the transitional period toward a free-market economy (e.g. the necessity of a new mentality; the science of management in general -"We began to learn somehow, I'm telling somehow as we are not 100% clear with how we should do the management, the science of management. So, we are still far away from it, but are much more knowledgeable, so we cannot be ripped of as we were before." [P7, p1-2]; working with the new, but still old system; forging business relationships; forecasting; contracting - "Speaking about what I learned, I only learned that somehow we have to ask more money after entering into the contract because we would be secure if our clients would pay 5% of the contracted amount right at the beginning....to enter into the contract in such a way that we should not be in lost even if they are paying late. Thus, the foreseen bank interest rates to be covered." [P2, p4]; compromising; being persistent), about how to run their own business (e.g. setting company rules and regulations; establishing a lucrative payment system; the necessity of up-dated technology; advertising; human interaction; building credibility, accountability, trustworthiness) and about the need to become better professionals - "This is it, and I want to develop into a much better professional. ....So this was number one, and number two would be, the implementation of modern work techniques to ease my work and to raise my productivity. That's what I meant when I said about changing mentality, to learn from wherever and to use what I learn in my work." [P5, p9-10].

Influence on Learning of the Transition to Free-Market Economy. The recounts of the managers give a vivid picture of the Romanian business environment which has such an effect on the learning and actions of these managers. One of the previously quoted managers who runs a successful business (on the top county list) reflecting on this situation explained that "I am struggling since three years to make it right. It goes towards better, but if the actual government will not do something for us, not necessarily for my type of business, but for us the private owners, I cannot see a more favorable way to continue than we have now. So, finally I cannot say that I have a situation of my own. My case is general as I am dissatisfied with some things, not that I am dissatisfied with my work, but I would like to do things better, more organized, including less stress if some problems could be solved. So, a big problem is that of the inflation which I cannot see solved soon. The other problem is that of cash flow which again I cannot see solved and another problem are the big taxes for which we have some hopes that they could be solved. And another problem which I cannot see solved is that of support from the banks, because we were not born with a money making machine, we worked for the money we have and if at a certain time you want to expend you cannot without the help of the bank, help which should be reasonable, otherwise you stand in one place and the inflation will outrun you. [P5, p7]

As this study is nearing its completion, additional findings and conclusions will be presented at the conference.

Contribution to New Knowledge in HRD

This study elaborates on the theory of informal and incidental learning in the workplace originally articulated by Marsick and Watkins (1990) adding thick description to the individual learning model. Understanding the nature of the learning of senior managers of Romanian private companies as they transition to a free-market economy may reveal ways to augment and support managers' learning and it may also provide useful hints for designing and implementing management training and development programs in this country. Revealing informal learning processes amidst a radically changing environment with tight resources may prove to be useful to practitioners who work in similar environments. As the 1990s are offering a greater opening to direct foreign trade and foreign investment in Romania, the results of this study should also help Global Human Resource Developers transfer management learning theories and practices across cultural and national boundaries.

References

Anonymous. (1995). Firm offers. Banker,145(838), 41-42.

Akin, G. (1987). Varieties of managerial learning. Organizational Dynamics, 16(2), 36-48.

Anton, I., Danciu, D., & Mitu, C. (1996). The role of SMEs in the regional redevelopment of Romania. Eastern European Economics, 34(2), 65-95.

Burgoyne, J. G. (1995). Learning from experience: From individual discovery to meta-dialogue via the evolution of transitional myths. Personnel Review, 24(6), 61-72.

Burgoyne, J. G., & Hodgson, V. E. (1983). Natural learning and managerial action: A phenomenological study in the field setting. Journal of Management Studies, 20(3), 387-399.

Cseh, M. (1992). Managerial prerequisites for a successful transition to a free-market economy in Romania. Unpublished master's thesis, The University of Georgia, Athens, Georgia.

Dechant, K. (1989). Managerial change in the workplace: Learning strategies of managers (Doctoral dissertation, Columbia University Teachers College, 1989). Dissertation Abstracts International, 50(08), 2349A.

Flanagan, J. C. (1954). The critical incident technique. Psychological Bulletin, 51(4), 327-358.

Kops, W. J., Jr. (1993). Self-planned learning efforts of managers in an organizational context. Dissertation Abstracts International, 54(09), 3294A. (University Microfiche No. AAC NN82956)

Lombardo, M. M. (1985, May). Five challenging assignments. Issues and Observations, 1-7.

Marsick, V. J., & Watkins, K. E. (1990). Informal and incidental learning in the workplace. London, England: Routledge.

Marsick, V. J., & Watkins, K. E. (1996). Lessons from informal and incidental learning. In J. G. Burgoyne (Ed.), Management learning. London: McGraw-Hill.

McCall, M. W., Jr., Lombardo, M. M., & Morrison, A. M. (1988). The lessons of experience: How successful executives develop on the job. Lexington, Massachusetts: Lexington Books.

Nagy, S. (1992). Historical background of management development in Central and Eastern Europe. Review of Business,13(4), 10-12.

Nicolescu, O. (1992). Management education in Romania. Journal of Management Development, 11(5), 34-40.

Patton, M. Q. (1990). Qualitative evaluation and research methods (2nd ed.). Newbury Park, CA: Sage Publications.

Query, J. L., Jr., & Kreps, G. L. (1993). Using the critical incident method to evaluate and enhance organizational effectiveness. In S. L. Herndon & G. L. Kreps (Eds.), Qualitative research: Applications in organizational communication (pp.63-77). Cresskill, New Jersey: Hampton Press, Inc.

Sachs, D. J. (1990, January). Eastern Europe's Economies: What is to be done?, The Economist.

Sachs, D. J. & Lipton, D. (1990a, Spring) Creating a Market Economy in Eastern Europe: The Case of Poland, Brookings Papers on Economic Activity.

Sachs, D. J. (1991, September-October). Crossing the Valley of Tears in East European Reform, Challenge.

Stuart, R. (1986). Social learning. Management Decision, 24(6), 32-35.

Stuart, R. (1989). Using others to learn: Some everyday practice. Management Decision, 27(4), 98-105.

Verlander, E. G. (1992). Executive education for managing complex organizational learning. Human Resource Planning, 15(2), 1-18.

Wagner, R. K., & Sternberg, R. J. (1985). Practical intelligence in real world pursuits: The role of tacit knowledge. Journal of Personality and Social Psychology, 49, 436-458.

Watkins, K. E., & Marsick, V. J. (1992). Towards a theory of informal and incidental learning in organizations. International Journal of Lifelong Education, 11(4), 287-300.

Weber, R. P. (1985). Basic content analysis. Beverly Hills, CA: SAGE Publications, Inc.

Young, J. D. (1994). Small business owners/managers: A framework for examining management self-development. Dissertation Abstracts International, 56(01), 67A. (University Microfiche No. AAC NN93844)

Yukl, G. A. (1981). Leadership in organizations. Englewood Cliffs, New Jersey: Prentice-Hall, Inc.

Zemke, R. (1985, August). The Honeywell studies: How managers learn to manage. Training, 46-51.

Behaviors Related to Perceptions of Leadership in Self-directed Project Groups

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The purpose of the two studies reported in this article was to gain information on behaviors related to perceptions of leadership in extended project groups, to develop a leader emergence scale that would measure these behaviors, and to use this scale plus short-answer questions to gain information on individuals identified as preferred group leaders. The resultant eight-item scale distinguished between leaders and non-leaders.

Over 7,500 published studies of leadership (Bass, 1990) have resulted in a myriad of theories and lines of research. One of the most enduring of these is the identification of effective leadership behaviors, a program of research that began in the 1950s and 1960s at Ohio State University and the University of Michigan (Fleishman, 1953; Halpin & Winer, 1957; Likert, 1967). The task-centered and person-centered leader behaviors identified in early research have given rise to comprehensive theories of leader behavior (Blake & Mouton, 1964; Misumi & Peterson, 1985) and taxonomies of effective behavior (House & Mitchell, 1974; Luthans & Lockwood, 1984; Morse & Wagner, 1978; Page, 1985; Yukl, 1987; Yukl & Nemeroff, 1979). The taxonomies, for the most part, attempt to reconcile general and situational approaches to leadership. Thus, an effective leader is characterized as one who possesses a reservoir of effective behaviors and is able to adapt his or her behavior as necessary to meet the demands of the situation.

Leadership behaviors are in some ways similar to positive roles that are essential for effective group functioning. The two primary group roles of task and maintenance functions (Bales, 1953; Benne & Sheats, 1948) have been used in factor analyses of questionnaire measures of leadership behavior (Bowers & Seashore, 1966; Halpin & Winer, 1957). Participatory leadership, "the use of various decision procedures that allow other people some influence over the leader's decisions" (Yukl, 1994, p. 157), was considered as a category of behavior distinct from task-oriented and relationship-oriented behavior in the Michigan leadership studies, but not in the Ohio State studies, in which consultation was considered as part of relationship-centered behavior. The relationship between groupwork and leadership is particularly important today as teamwork becomes increasingly prevalent in organizations (Ancona, 1990; Bettenhausen, 1991) and as universities continue to offer leadership courses and programs that, more often than not, use group activities to develop leadership skills (Bass, 1990). Self-directed or autonomous work teams offer opportunities for individuals to demonstrate their leadership capabilities.

Effective Group Leadership Behaviors

Several researchers (Larson & LaFasto, 1989; Sweeney & Allen, 1988; Thamhain & Wilemon, 1988, Kolb, 1996) have examined the behaviors of officially designated team leaders. Less attention, however, has been focused on the behaviors of unofficial or emergent leaders. Emergent leaders are members of groups who exert significant influence over other members even though no formal authority has been vested in them (Schneier & Goktepe, 1983). Leaders emerge as group members reach a consensus "that one (or more) individual(s) could serve the group more usefully in attaining group goals than the other members" (Bass, 1981, p. 13).

A recent study by Pavitt, Whitchurch, McClurg, and Petersen (1995) examined both the behavior of emergent leaders and perceptions of group members. First, members of a small group communication class identified the following eight behaviors as descriptive of an ideal leader: stated the group's procedure, encouraged group member participation, encouraged harmony among group members, summarized the group's decision, facilitated group discussion, played devil's advocate, managed conflict, and kept group discussion organized. A second group of students used questionnaires developed from these behaviors to evaluate each other on behaviors and measures of

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leadership following a 55- to 75-minute videotaped group discussion. Trained observers viewed the tapes and coded the actual behaviors exhibited by each group member. The resulting frequencies were then compared to the ratings of behaviors completed by group members. The results indicated that the questionnaire ratings, which were based on perceptions of behavior, were far better predictors of leader evaluations than measures of actual behavior, which were derived from observation of the videotaped discussion. The researchers concluded that "participants judged behavioral performance with some accuracy only in those rare cases in which instances of the behavior's performance were relatively numerous, but in the vast majority of cases, made behavioral judgments that were largely prototype-based" (p. 259).

The findings concerning member perceptions are important because actual leadership behaviors are difficult to document in situations other than brief discussion groups and would be of limited value, in most cases, without information about the antecedents and repercussions of the specific behaviors. The Pavitt et al. (1995) study suggests that, at least in studies of leader emergence, questionnaires measuring perceptions of group members are an appropriate means of gathering data on leader behavior.

Study One

Behaviors that allow members to emerge as leaders in discussion-centered groups may or may not be similar to those that are important when groups are engaged in extended projects that combine discussion with execution of tasks. The purpose of the first study reported here was to gain information about behavior related to perceptions of leadership in extended project groups. The following research question was posed:

> *RQ1: How do group members describe the leadership-relevant behavior of individuals they perceive as group leaders?*

Method

Sample. Participants in this study were 60 undergraduate students (28 female; 32 male) enrolled in two sections of an upper-division applied organizational communication class at a large eastern university. Two-thirds of the students were seniors, and one-third were juniors. Just under 50 percent of the sample were business majors, one fourth were liberal arts majors, and the remaining one-fourth majored in environmental resource management. The average age was 21.

Procedures. At the beginning of the eighth week of class, the students were assigned to mixed-sex groups of four or five members each. Each group formed a mock company and completed two projects during the second half of the semester. The first was a human resource task involving the hiring and development of an employee. The second was a demonstration involving a problem-solving situation and the methodology each group used in resolving the problem. The groups in this study fulfill the conditions of realistic "full-fledged groups" set forth by Poole (1983).

At the end of the semester, students responded to the following question regarding the leadership behavior of each of the members of their group:

> *If you believe that this person served in a leadership role, please list the traits and/or behaviors exhibited by this person that, in your opinion, led to his or her emergence as a leader. Leave blank if you believe that this person did not serve in a leadership role.*

Coding System. Using analytic induction techniques similar to those employed by Vangelisti, Daly, and Rudnick (1991) and Dolin and Booth-Butterfield (1993), a research assistant and I developed 19 categories of leader traits and behaviors. This technique involved separating the short-answer responses into phrase units that the researchers then grouped to provide the closest conceptual fit or cluster. The categories were examined and modified until a workable category system emerged. Complete descriptions of the categories were developed, and the data were then coded according to those descriptions. After a training session in which both the research assistant and I coded 15 percent of the 399 responses, the research assistant coded the remainder. Twenty percent of the responses randomly selected were then cross-coded by me to establish reliability. Percentage of agreement between coders across all categories was 94 percent (*pi* = .93), which was judged acceptable.

Results

The following 19 categories of leader behavior emerged from the phrase sort: 1) took charge, 2) took charge when necessary, 3) was task oriented, 4) was organized, 5) established/facilitated effective group procedures, 6) was goal oriented, 7) led discussion, 8) had high performance standards, 9) exhibited knowledge of and/or experience in the task, 10) was committed/dedicated to the task 11) initiated core ideas for the project, 12) contributed ideas, suggestions, opinions, 13) solicited ideas/suggestions/opinions, 14) had good communication skills, 15) worked well with others, 16) motivated others, 17) displayed effective conflict management skills, 18) was self-confident, 19) was domineering/controlling. All responses could be coded using the 19 categories and one additional category for non-responses.

Instructions for the short-answer question directed respondents to leave a blank if they did not perceive a particular member as a leader. Overall, 41 of 59 participants (69%) were described by others as leaders in the short-answer responses; 266 total phrases were coded from 110 responses, an average of 2.42 per response. The most frequently mentioned behaviors are reported in Table 1.

Table 1. Behaviors Mentioned Most Frequently in Response to Leadership Question

Behavior	*Percentage*
Contributed ideas, suggestions, opinions	31
Took charge	26
Exhibited knowledge of/experience in task	24
Was committed and dedicated to task	16
Was domineering and controlling	16
Established effective procedures	16
Worked well with Others	16

Study Two

More than two-thirds of the group members in Study One were described by other group members as leaders. While this finding might indicate that leadership was shared, it also is likely that, as has been reported in past studies, (Zaccaro, Foti, & Kenny, 1991), participants were overly generous in attributing leadership characteristics and behaviors to fellow group members. This tendency could obscure emergence of the behaviors that are performed by primary leaders. I decided, therefore, to ask group members in Study Two to make a forced choice of one preferred leader and to describe reasons for the choice of that person. Sociometric choice of the leader by peer ratings and secret ballot has been used repeatedly in the leadership literature and has demonstrated strong predictive validity (Bass, 1981; Goktepe & Schneier, 1989). Participants also were asked to describe the behaviors exhibited by the preferred leaders that led to their being identified as such.

Additionally, participants rated each group member on an eight-item leader emergence scale that consisted of five items drawn from the short-answer responses analyzed in Study One and three items developed by Kent and Moss (1990). The scale is described below in the *Measures* paragraph. The purpose of the present study was to use this expanded measure and responses to short-answer questions to gain information about preferred leaders and the remaining sample (called non-leaders for ease of discussion). Some of the behaviors mentioned as important by group members in Study One appeared to be behaviors that would be exhibited by effective members, as well as leaders. If these non-directive behaviors are crucial to leadership, there should be differences in scores between a sample of preferred leaders and non-leaders. If these behaviors are important for all members, including leaders, however, there may be no significant differences between the two samples. Thus,

> *RQ1: Does the expanded leader emergence scale distinguish between preferred leaders and non-leaders?*

The short-answer responses analyzed in Study One included descriptions of leadership behaviors of two-thirds of the sample. The inclusion of such a large portion of the sample might have obscured the behaviors that were exhibited by those who were primary, or preferred, leaders. The second research question addresses the behaviors of the preferred leaders:

> *RQ2: How are preferred leaders described by group members?*

Sample. Participants in this study were 123 undergraduate students (64 female; 59 male) enrolled in four sections of an upper-division applied organizational communication class at a large eastern university. Fifty-four percent of the students were seniors, and 42 percent were juniors. Forty-seven percent of the sample were business majors, 39 percent were liberal arts majors, and the remaining 14 percent majored in environmental resource management. The average age was 21.

Measures. A research assistant and I examined the frequencies of occurrence for the 19 categories of leader behaviors identified in Study One to determine what macro-categories would best capture the essence of these behaviors. After the categories were selected, the wording of the individual items was decided. The expanded eight-item scale consisted of the following three items from the Kent and Moss (1990) scale and five new items: 1) assumed a leadership role, 2) led the conversation, 3) influenced group goals and decisions, 4) took charge of the group, 5) was focused on the task, 6) exhibited knowledge of and/or experience in the task, 7) encouraged collaborative effort and invited input from other group members, and 8) contributed valuable ideas, suggestions, and opinions. Group members completed the scale for each of the members of their group. The Kent and Moss items were included because of their demonstrated reliability in identifying emergent leaders in discussion groups. All items were analyzed individually to gain maximum information concerning the ability of each to distinguish between preferred leaders and non-leaders. In addition to the short answer question used in Study One, participants also were asked to respond to the following two items:

> *If you could choose just one person from your group to serve as the leader for another similar group project, who would that person be?*
>
> *Please state briefly the one primary reason why you would choose this person.*

Coding. A preliminary analysis of the short-answer data indicated that the coding system developed in Study One could be used to classify the responses to both short-answer questions. After a training session in which both the research assistant and I coded 10 percent of the 434 responses, the research assistant coded the remainder. Twenty percent of the responses randomly selected were then cross-coded by me to establish reliability. Inter-coder agreement was 95 percent (*pi* = .94) for the general leadership question and 94 percent (*pi* = .93), for the preferred leader question, both of which were judged acceptable.

Procedures. The procedures were the same as those reported in Study One. The choice-of-preferred-leader questions were administered at the same time as the leader emergence measure.

Results

Reliability. Reliability as assessed using Cronbach's alpha for the three items (questions 1-3) from Kent and Moss's (1990) scale was .94; reliability for the eight-item scale was .94.

Differences Between Leaders and Non-Leaders Individuals who were identified as preferred leaders by at least two group members other than themselves were labeled the "preferred leader group." Individuals who shared leadership with another person in their group were included in the category of preferred leaders, but those who were mentioned by just one person (usually the individual everyone else named as the leader) were not. A total of 31 individuals from the total sample of 123 (25%) were identified as preferred leaders.

To answer Research Question 1, differences between the means of the preferred leader group and the non-leader group were calculated. Because of the unequal Ns in the preferred leader and non-leader samples, a GLM ANOVA procedure in SAS was used to examine differences between the means. The results for the ANOVAs were as follows: three-item scale (F = 73.81, df = 1/111, p = .0001; leader M = 5.34 [0.60], non-leader M = 3.80 [0.94]); eight-item scale (F = 61.86, df = 1/111, p = .0001; leader M = 5.53 [0.45], non-leader M = 4.32 [0.82]). Thus, the expanded scale does distinguish between leaders and non-leaders. Also, each individual item distinguishes between the two groups. ANOVAs for individual items are reported in Table 2.

Table 2. Means, Standard Deviations, and F Tests for Preferred Leaders and Non-Leader Groups

	Preferred Leaders		*Non-Leaders*		
Item #	*Means*	*s.d.*	*Means*	*s.d.*	*F*
1	5.34	0.85	3.35	1.11	82.54***
2	5.31	0.67	3.82	0.98	61.44***
3	5.38	0.44	4.21	0.92	47.40***
4	4.96	0.82	3.15	1.10	71.34***
5	5.92	0.61	5.23	1.04	12.30***
6	5.76	0.62	4.87	0.90	26.30***
7	5.53	0.72	4.71	1.06	16.28***
8	6.03	0.51	5.22	0.97	20.04***

***p < .001

Qualitative Data The same question analyzed in Study One also was analyzed for Study Two. In Study Two, however, only responses pertaining to the 31 individuals identified as preferred leaders are reported; 225 total phrases were coded from 128 responses, an average of 1.76 per response. The top five responses are reported in Table 3.

Table 3. Behaviors Mentioned Most Frequently in Response to Leadership Question for Preferred Leaders

Behavior	*Percentage*
Was committed/dedicated to the task	26
Took charge	21
Exhibited knowledge of/experience in task	16
Contributed ideas, suggestions, opinions	15
Exhibited self-confidence	14

The second short-answer question, "Please state briefly the one primary reason why you would choose (this person) as the preferred leader (of your group)," was analyzed in terms of responses concerning the 31 preferred leaders. For these individuals, a total of 122 phrases were coded from 87 responses, an average of 1.4 phrases per respondent. Percentages were based on the total number of responses. The following categories were those most frequently cited: took charge (29%), was committed/dedicated (23%), was task-oriented (16%), exhibited knowledge of and/or experience in the task (15%), and worked well with others (14%).

Discussion

Emergent Leader Behaviors. The pattern of responses to the short-answer questions asked of respondents in the two studies, particularly the differences between responses in Study One, which were based on descriptions of everyone who was mentioned as a leader, and responses in Study Two, which were based on responses only for preferred leaders, provide additional information about differences between leaders and non-leaders. One behavior in particular--contributed valuable ideas, suggestions, and opinions--may have been overstated as an important leader behavior in Study One. Although this behavior remained important in Study Two, its frequency was reduced by half when only data for preferred leaders were examined. Since one can assume that all members contribute ideas, suggestions, and opinions during the course of a project, one explanation for this finding is that this behavior is one that came to mind when members were searching for something positive exhibited by someone who did not take charge or demonstrate other characteristics of leadership. This suggests that, as reported by Zaccaro, Foti, and Kenny (1991), members' tendencies to be generous in attributing leadership behaviors to other members might obscure what actually contributes to emergent leadership.

Two other categories--was committed/dedicated to the task and exhibited self-confidence--increased substantially in frequency between Study One and Study Two. Although assessments of the latter behavior might be significantly influenced by perceptions of leadership in general (e.g., one is a leader; thus, she or he must be self-confident), the assessment of task commitment seems to be more behaviorally based. One of the major differences between short discussion groups in which participants are required to participate in a timed discussion and longer project groups is that participants vary more in amount of effort exerted. Not all participate equally in a timed discussion, of course, but active participation in such groups requires only a slight additional effort beyond what is required to receive participation points or class credit. In project groups, however, a substantial amount of effort is required for a positive outcome. Not everyone participates equally in that effort. The comments classified as "was committed and dedicated" lead me to believe that group members were well aware of the level of contribution of the various members. Also, since the project tasks in this study required collection of resource materials, preparation of audiovisual materials and handouts, collection and analysis of data, and preparation of written reports, it would be difficult for members to be deceived about which members did what work.

Although findings reported by Pavitt et al. (1995) suggest that perceptions are what matter in ratings of leader emergence, it appears to be important to distinguish between perceptions and actual behaviors in terms of effort extended.. The results of this study suggest that leaders in small groups actually do expend more effort than anyone else and that this level of commitment is a primary factor in their emergence as leaders. If this interpretation is correct, it has implications for the teamwork focus that currently exists in today's organizations and may also help to explain why individuals who agree with teamwork in concept often have negative experiences when actually placed on teams. Teamwork certainly is not working as expected if most of the work is being done by a few people. On a more positive note, however, an alternative explanation is that people who emerge as leaders have a higher degree of commitment to tasks and a greater desire to get the job done than do most individuals and, as a result, simply take charge.

Use of the Scales. The expanded leader emergence scale distinguished between leaders and non-leaders, indicating that this scale shows promise as a measure of leadership in extended project groups. The results for the phrase sort in Study One were used to develop specific wording for the expanded leader emergence measure used in Study Two. Findings from the latter study suggest, however, that, Item 5, "was focused on the task," might better distinguish between leaders and non-leaders if the wording were changed to emphasize a different aspect of task--commitment and dedication rather than focus; thus, the item would read, "Was committed and dedicated to the task." Item 5 was the item that most strongly limited reliability of the expanded eight-item measure. It was least discriminating in distinguishing between leaders and non-leaders, even though it revealed a significant difference between leader and non-leader means. Future research might test the efficacy and reliability of a scale consisting of the following: 1) assumed a leadership role, 2) led the conversation, 3) influenced group goals and decisions, 4) took charge of the group, 5) was committed and dedicated to the task, 6) exhibited knowledge of and/or experience in the task, 7) worked well with others, and 8) contributed valuable ideas, suggestions, and opinions.

Implications for HRD

Popular wisdom on leadership stresses the importance of involving others in decision making. The results of this study suggest that, at least when it comes to being viewed as a leader when one is not in an official leadership position, taking charge is an acceptable, and desired behavior, as long as the leader also appears to respect the ideas of other people. This has implications for professionals involved in planning and executing leadership and management development programs, as well as for those who specialize in employee development.

The leadership emergence scale developed from these studies should be a useful tool for HRD scholars and practitioners. Early identification of individuals with leadership potential would allow for development of this potential, benefiting both individuals and organizations. Those who aspire to leadership positions, but who do not emerge as leaders in management development situations, could receive feedback that might help them develop their leadership skills.

Lastly, with today's emphasis on teamwork, more information is needed on the distribution of work among team members. This information would be useful in addressing perceived or actual inequities in work load.

References

Ancona, D. G. (1990). Outward bound: Strategies for team survival in an organization. *Academy of Management Journal, 33*, 334-365.

Bales, R. F. (1953). The equilibrium problem in small groups. In T. Parsons, R. F. Bales, & E. A. Shils (Eds)., *Working papers in the theory of action*_(pp. 111-115). Glencoe, IL: Free Press.

Bass, B. M. (1981). *Stogdill's handbook of leadership* (2nd ed.). New York: The Free Press.

Bass, B. M. (1990). *Bass & Stogdill's handbook of leadership* (3rd ed.). New York: The Free Press.

Benne, K. D., & Sheats, P. (1948). Functional roles of group members. *Journal of Social Issues, 2*, 42-47.

Bettenhausen, K. L. (1991). Five years of group research: What we have learned and what needs of be addressed. *Journal of Management, 17*, 345-381.

Blake, R. R., & Mouton, J. S. (1964). *The managerial grid*. Houston: Gulf Publishing.

Bowers, D. G., & Seashore, S. E. (1966). Predicting organizational effectiveness with a four-factor theory of leadership. *Administrative Science Quarterly, 11*, 238-263.

Dolin, D. J., & Booth-Butterfield, M. (1993). Reach out and touch someone: Analysis of nonverbal comforting messages. *Communication Quarterly, 41*, 383-393.

Fleishman, E. A. (1953). The description of supervisory behavior. *Personnel Psychology, 37*, 1-6.

Goktepe, J. R., & Schneier, C. E. (1989). Role of sex, gender roles, and attraction in predicting emergent leaders. *Journal of Applied Psychology, 74*, 165-167.

Halpin, A. W., & Winer, B. J. (1957). A factorial study of the leader behavior descriptions. In R. M. Stogdill & A. W. Coons (Eds.), *Leader behavior: Its description and measurement* (pp. 117-141).
Columbus, OH: Bureau of Business Research, Ohio State University.

House, R. J., & Mitchell, T. R. (1974). Path-goal theory of leadership. *Contemporary Business, 3* (3), 81-98.

Kent, R. L., & Moss, S. E. (1990). Self-monitoring as a predictor of leader emergence. *Psychological Reports, 66*, 875-881.

Kolb, J. A. (1996). Comparing leadership behaviors and competencies in high- and average-performance teams. *Communication Reports, 9*, 173-183.

Larson, C. E., & LaFasto, F. M. (1989). *Teamwork: What must go right, what can go wrong*. Newbury Park, CA: Sage Publications, Inc.

Likert, R. (1967). *The human organization: Its management and value*. New York, NY McGraw-Hill.

Luthans, F., & Lockwood, D. L. (1984). Toward an observation system for measuring leader behavior in natural settings. In J. G. Hunt, D. Hosking, C. A. Schriesheim, & R. Steward (Eds.), *Leaders and managers: International perspectives on managerial behavior and leadership* (pp. 117-141). New York: Pergamon Press.

Misumi, J., & Peterson, M. (1985). The performance-maintenance (PM) theory of leadership: Review of a Japanese research program. *Administrative Science Quarterly, 30*, 198-223.

Morse, J. J., & Wagner, F. R. (1978). Measuring the process of managerial effectiveness. *Academy of Management Journal, 21*, 23-35.

Page, R. (1985). *The position description questionnaire.* Unpublished paper. Minneapolis: Control Data Business Advisors.

Pavitt, C., Whitchurch, G. G., McClurg, H., & Petersen, N. (1995). Melding the objective and subjective sides of leadership: Communication and social judgments in decision-making groups. *Communication Monographs, 62*, 243-264.

Poole, M. S. (1983). Decision development in small groups III: A multiple sequence model of group decision development. *Communication Monographs, 50*, 321-341.

Schneier, C. E., & Goktepe, J. R. (1983). Issues in emergent leadership: The contingency model of leadership, leader sex, leader behavior. In H. H. Blumberg, A. P. Hare, V. Kent, & M. F. Davies (Eds.), *Small groups and social interaction* (Vol. 1, pp. 413-421). Chicester, UK; John Wiley.

Sweeney, P. J., & Allen, D. M. (1988). Teams which excel. In R. Katz (Ed.), *Managing professionals in innovative organizations: A collection of readings* (pp. 262-266). Cambridge, MA: Ballinger Publishing Company.

Thamhain, H. H., & Wilemon, D. L. (1988). Building high performing engineering project teams. In R. Katz (Eds.), *Managing professionals in innovative organizations: A collection of readings* (pp. 301-314). Cambridge, MA: Ballinger Publishing Co.

Vangelisti, A., Daly, J., & Rudnick, J. (1991). Making people feel guilty in conversations. *Human Communication Research, 18*, 3-39.

Yukl, G. (1987, August). *A new taxonomy for integrating diverse perspectives on managerial behavior.* Paper presented at the American Psychological Association meeting, New York

Yukl, G. (1994). *Leadership in organizations* (3rd ed.). Englewood Cliffs, NJ: Prentice Hall.

Yukl, G. A., & Nemeroff, W. (1979). Identification and measurement of specific categories of leadership behavior: A progress report. In J. G. Hunt & L. L. Larson (Eds.), *Crosscurrents in leadership* (pp. 164-200). Carbondale, IL: Southern Illinois University Press.

Zaccaro, S. J., Foti, R. J., & Kenny, D. A. (1991). Self-monitoring and trait-based variance in leadership. An investigation of leader flexibility across multiple group situations. *Journal of Applied Psychology, 76*, 308-315.

Never let them see you smile: The lack of expressiveness among senior organizational leaders

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Folk theory and empirical studies generally indicate that women tend to be somewhat more expressive than men. This study looked at the levels of self-reported expressiveness among senior organizational leaders (781 males, 669 females). In several key organizational positions, including CEO, males reported themselves to be significantly more expressive than females. Further, both males and females reported extremely low levels of expressiveness. Potential reasons for these findings and their impact on HRD are discussed.

The organizational culture in Western society is influenced by the rational traditions of theorists such as Weber, Taylor, and Fayol (Sashkin, 1981). These traditions call for the cognitive "dehumanization" of organizations. However, recent physiological findings regarding emotion in individuals has revealed that cognition does not operate alone (Derryberry & Tucker, 1992). The evolution of the human brain has resulted in a complex system in which emotion influences cognition in areas such as learning, attention, and memory, and cognition influences emotion in areas such as attributions and appraisals. Because of the biological interdependence of cognition and emotion, leaders must work with organizational members across both cognitive and emotive structures in order to maximize their potential. This study explores the extent to which leaders demonstrate one of these structures--emotion.

Conceptual Framework

Essentially, organizations try to create impersonal and highly cognitive or rational frameworks or structures which would preclude the emergence of emotion in the first place. A key consequence of this type of "bureaucratic" control, according to Weber, is:

> The dominance of a spirit of formalistic impersonality, ...without hatred or passion, and hence without affection or enthusiasm. The dominant norms are concepts of straightforward duty without regard to personal [and emotional] considerations (Boone & Bowen, 1987, p. 16).

Thus, theory informs us that the ideal organization type is one in which emotion has no place. However, people are both rational and emotional beings. Leadership research indicates that these very organizational structures created to facilitate improved performance and increase capital may be at odds with individual leadership strategies, which supposedly incorporate both rational and emotional components (Yukl, 1981), to do the same.

Emotion Theory. Emotion has often been considered irrelevant to the important work of logic and the scientific method. Firmly rooted in classical Greek philosophy, the Western world, in particular, has regarded emotionality as the antithesis of rationality. In The Nicomachean Ethics (Treddenick, 1955), Aristotle explains that "the soul is part rational and part irrational" (p. 88). Within the realm of irrationality exist the emotions. It is this bi-polar view of emotionality and rationality which has become the norm in Western industrialized society.

Emotions became the subject of serious modern inquiry in the late 19th and early 20th centuries. Although there is no classically accepted definition of emotion itself, two streams of emotion theory are generally acknowledged (Hochschild, 1983). The first is grounded in the biological concepts of Darwin and supplemented by the philosophies of, among others, James and Freud. Called organismic or naturalistic, this model focuses on the biological antecedents of emotion holding that "emotions are indubitably physiological" (Davidson & Cacioppo, 1992, p. 21). To varying degrees, these theorists believe the true nature of emotion is biological and that

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pure, core emotions can be observed in all people regardless of cultural influence. In this tradition today, Scherer and his associates examine the physical experience and expression of emotion (Scherer, 1988). Zajonc and Ekman have significantly contributed to this stream of theory by their studies of physical arousal and emotional expression (Gallois, 1993).

The second stream of theory is grounded in the social concepts of Dewey, Gerth, Mills, and Goffman (Hochschild, 1983). Known as symbolic interactionism or social constructionist, this model places emphasis on the social context of emotion. Emotions are a product of a dynamic relationship with the social system and are created and recreated throughout the interaction. While acceptance of biological components is implicit to most of these theorists, they are of lesser significance in understanding the nature of the experience and expression of emotion. Today, theorists such as Lazarus and Harré feel that emotional labels are attributed only after individuals cognitively assess their contextual experience (Gallois, 1993).

These streams of research have led to both empirical and theoretical works on emotional expression. Studies in different traditions of expressiveness indicate that individuals who tend to be unexpressive have higher levels of physiological reaction to emotion-eliciting situations than those individuals who tend to be expressive (Notarius & Levenson, 1979; Weinberger, Schwartz, & Davidson, 1979). Later studies in the suppression of emotional expression found that suppression elicits an increase in sympathetic nervous system arousal which, if excessive or sustained for a long period of time, may cause adverse health outcomes (Levenson, 1993). The popular *Executive EQ* (Cooper & Sawaf, 1997) presented a mix of theory and research on the importance of emotional intelligence, which includes expression, in successful leadership. Conger (1993) argued that organizational support for a leader stems largely from that individual's emotional expressiveness, which is an important element of purpose, persuasion, and inspiration.

Leadership Theory. Leadership theories and research to explore those theories have largely occurred within this century. The pervasive trends in leadership theory and research, according to Bryman (1992), have been within four stages. The four stages are identified as: Trait Approach (prior to the late 1940s); Style Approach (late 1940s to late 1960s); Contingency Approach (late 1960s to early 1980s); and New Leadership Approaches (since 1980s). These approaches all have a basic assumption or theme. Trait Approach is based on the idea that leadership is innate; Style Approach addresses the belief that leader behavior is tied to leadership effectiveness; Contingency Approach has to do with the premise that effective leadership is affected by the situation; and, finally, New Leadership Approach (charismatic leadership) focuses on the position that leaders need a vision (Bryman, 1992).

Early work in the Style Approach led to the conclusion that effective leadership is both task oriented and people oriented. Studies conducted at Harvard in the late 1940s showed that the most effective leaders were those who engaged in a high volume of both task-oriented and socio-emotional behavior (Bales, 1958; Sashkin, Gorman, Higgins, Johnson, & Schwandt, 1995). These studies also revealed that leaders sometimes demonstrated only task-oriented behavior, but they rarely engaged in only socio-emotional behavior. The Ohio State studies had similar conclusions (Sashkin, et al, 1995). The two most prevalent categories of behavior found in leaders were "initiating structure" and "consideration" behaviors. Again, the most effective leaders engage in high levels of both task and interpersonal activities.

Seminal work on charisma and, possibly, charismatic leadership was done by Max Weber (1864-1920). According to Bryman (1992), Weber recognized three types of authority, each claiming a legitimate exercise of power. The three types are: authority based on rational grounds or legal authority; authority based on traditional grounds or age-old traditions/customs; and authority based on charismatic ground or devotion to exceptional sanctity, heroism, or exemplary character of an individual person. These types of authority were based on an ideal state and could not be applied to organizations.

The limitations in scope of these earlier approaches led to a growing interest in the concept of "transforming leadership," a term which was first adopted by James MacGregor Burns in 1978 (Bryman, 1992). Burns made the distinction between leaders and managers based on the older works of Weber which looked at the differences between economic and non-economic sources of authority. Thus, the beginning of the use of the term "transformational leadership" referred to a more complex and higher level relationship between the leader and follower. This type of relationship relied on satisfying higher needs, engaging the full person to meet mutual stimulation and reaching elevations in the relationship which could convert followers to leaders and leaders to moral agents. This was contrasted with more traditional, supervisory, management approaches of exchange for services/duties, rewards, pay, security, and other compensations which were now referred to as "transactional leadership" (Sashkin, 1995).

Words throughout the literature which have been used to describe transformational leaders and leadership include passion, care, intensity, confidence, self-confidence, respect, values, and trust—each of which is considered an "emotion" or "emotion-laden" word (Shaver, Schwartz, Kirson, & O'Connor, 1987; Clore, Ortony, & Foss, 1987; Etzioni, 1988; Ward & Throop, 1989). Bass, who writes that transformational leadership comprises charisma, even states that, by emotional arousal initiated by the charismatic leader, a sense of excitement is generated in the followers (Bryman, 1992). In Sashkin's (Rosenbach, Sashkin, & Harburg, 1996) work, several of the scales of The Visionary Leader/The Leadership Profile (TLP) either implicitly or explicitly address emotional/feeling issues: Communications Leadership, "...they [transformational leaders] pay attention to and appreciate followers' feelings" (p. 7), Credible Leadership, "Because they trust others they are themselves trusted" (p. 7), Caring Leadership, "Transformational leaders consistently and constantly express concern for others" (p. 7), Confident Leadership, "Transformational leaders have a basic sense of self-assurance" (p. 7), and Principled Leadership, "An effective transformational leader helps develop and support certain shared values and beliefs" (p. 7).

The ability to express emotion may thus be considered a fundamental characteristic of interpersonal relationships in the work environment, in particular when a leadership role is involved. "Consideration", "support" and "group-maintenance" are all leadership functions which are highly emotive in nature and which are found in almost every leadership theory to date (Yukl, 1981; Sashkin, et.al., 1995). If research indicates that the most effective leaders display high levels of both task-oriented and emotionally-oriented behaviors (or transactional and transformational leadership behaviors), it is reasonable to believe that the most senior leaders in organizations will display high levels of both types of behavior. Because of the negative connotations often associated with key elements of emotionally-oriented behavior (i.e., the expression of emotion), this study focused only on the extent to which senior leaders engaged in that behavior.

Methods

The Leadership Profile (TLP), with various demographic questions, was administered to 8000 members of the American Management Association (AMA) in 1995; 1453 members returned the survey (approximately 18%). The respondents included 781 males and 669 females; three individuals did not respond to the gender item. A four-item scale which measured expressiveness was isolated from the TLP and tested for reliability using Cronbach alpha. The scale was then used to determine demographic differences between leaders' expressiveness. Specifically, expressiveness differences were tested between male and female leaders using independent samples *t*-tests for the entire sample and for the six leadership positions given by the respondents (Chief Executive Officer, Chief Operating Officer, Chief Financial Officer, Executive Vice President, Vice President, and Other). Also, ANOVAs were conducted to determine expressiveness differences between the above positions by gender.

The four items isolated from the TLP which were used to determine expressiveness included:

1. I show I care about others.
2. I express appreciation when people perform well.
3. I show concern for the feelings of others.
4. I communicate feelings as well as ideas.

The Cronbach alpha for the above items was .7646. A Cronbach alpha of .70 or higher is much more significant for scales with fewer items (less than ten) than it is for scales with more items (Spector, 1992; Cortina, 1993). As a result, the scale was considered to be reliable for use to conduct further analyses with the data.

Results

The potential range of scores for expressivity was 4.00 (expressiveness to "little or no extent") to 20.00 (expressiveness to a "very great extent"). The range of scores for male and female leaders by position is represented in Table 1.

Table 1. Range of Self-reported Expressiveness Scores by Gender for Leadership Positions

	CEO	**COO**	**CFO**	**EVP**	**VP**	**Other**
Male	4-16	4-13	4-14	4-13	4-15	4-15
Female	4-13	4-13	5-18	4-14	4-13	4-15

The first test conducted was an independent samples *t*-test to determine if gender differences in expressiveness existed among senior leaders. Male leaders rated themselves as significantly more expressive than female leaders (overall mean for males, 8.20; overall mean for females, 7.40, p<.001). This difference in expressiveness between male and female leaders led to subsequent analysis of gender differences based on the position held by the leader.

The sample was sorted based on the six positions given by the respondents: Chief Executive Officer (CEO), Chief Operating Officer (COO), Chief Financial Officer (CFO), Executive Vice President (EVP), Vice President (VP), and Other. Independent samples *t*-tests were conducted to determine gender differences at each of the positions. Males reported themselves to be significantly more expressive than females at the CEO (p<.001), COO (p<.05), VP (p<.01), and Other (p<.001) positions (Table 2).

Table 2. Self-reported Expressiveness Means/Standard Deviations by Gender for Leadership Positions

	CEO***	**COO***	**CFO**	**EVP**	**VP****	**Other*****
Males	8.40 (2.46)	8.08 (2.20)	8.56 (2.09)	7.90 (2.27)	7.83 (2.39)	8.61 (2.66)
Females	7.02 (2.01)	6.52 (2.64)	8.55 (2.48)	7.29 (2.31)	7.27 (2.24)	7.49 (2.35)

Significance levels for independent samples *t*-tests: *p<.05; **p<.01; ***p<.001

A subsequent ANOVA was conducted to determine expressiveness differences among positions for both male and female leaders. Although post-hoc analyses revealed no significant differences between positions for male leaders, the overall F-ratio (Table 3) indicated that some linear combination of responses by male leaders generated a significant self-reported difference in expressiveness, F(5, 737) = 2.55, p<.027. The overall F-ratio for female leaders also indicates a significant difference between leadership positions, F(5,628) = 4.12, p<.001 (Table 4). However, post-hoc analyses indicated that female CFOs rated themselves as more expressive than did COO, CEO, and VP respondents. Differences between CFOs and EVP and Other respondents were not significant.

Table 3. ANOVA Table for Expressiveness of Male Respondents by Leadership Position

Source	**DF**	**Sum of Squares**	**Mean Squares**	**F Ratio**	**F Prob**
Between Groups	5	73.46	14.69	2.55	.027
Within Groups	737	4243.21	5.76		
Total	742	4316.66			

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Table 4. ANOVA Table for Expressiveness of Female Respondents by Leadership Position

Source	DF	Sum of Squares	Mean Squares	F Ratio	F Prob
Between Groups	5	107.35	21.47	4.12	.001
Within Groups	628	3274.07	5.21		
Total	633	3381.42			

Discussion/Conclusion

The difference between male and female leader self-reports of expressiveness raises some interesting questions. Emotion research indicates that, in general, women are better at both encoding and decoding emotion; in other words, women are better at expressing emotion (Gallois, 1993). Among senior organizational leadership in this sample, the men report themselves to be better at encoding emotion. There are several possibilities for this difference.

First, it is possible that women who have been so successful in a male dominated environment which traditionally does not value emotional expression have learned to suppress their expressiveness. Davis, LaRosa, and Foshee (1992) point out that "women must 'manage' their sexuality and gender as a necessary component of organizational membership" (p. 524). Jones and Gallois (1989) found that women are more likely to change their behavior according to the social context, becoming more "masculine" when necessary. Another possibility is that, since emotional expressiveness is not highly valued and since women still have minority representation in senior leadership positions, women leaders may be exaggerating their perceptions of how much emotion they express on the job. Stereotypic feminine behavior is institutionalized in non-leadership roles; therefore, women strive for a balance between masculinity, which is valued in leaders but only to a modest extent in female leaders, and femininity, which associates their role with non-leaders (Davis, LaRosa, & Foshee, 1992). A third possibility is that men self-report slightly higher emotional expressiveness due to the changing culture which is just beginning to accept "feminine" traits such as expressiveness.

While the overall self-reported expressiveness differences between male and female leaders is statistically significant, that difference is so slight (.80 points) it is not very meaningful. What *is* meaningful about the self-reported expressiveness scores, however, is how very low they are. The mean scores of all positions indicate that senior leaders express care, appreciation, and concern for others to, at best, a slight extent. This suggests that senior leaders are not taking responsibility for group maintenance functions, in particular the support functions (Yukl, 1981). As indicated earlier, most theories of leadership include some type of support or consideration for subordinates as an important factor in effective leadership (Yukl, 1981). The findings of this study reveal that one may be effective enough as a leader to achieve the most senior positions in the organization and still be almost completely lacking in the ability, or willingness, to demonstrate, or express, support for others.

HRD professionals face the issue of lack of leader expressiveness on several fronts. As members of organizations, they must confront the same lack of emotional feedback from senior leadership as all other organizational members. But, perhaps more importantly, HRD professionals are in a position to act as liaisons between senior leadership and organizational members. This shift from a classic training and development role to an internal consultant role means HRD professionals must assume a more strategic position in the organizational structure (J. Gilley, personal communication, July, 1996). Such a position will enable HRD professionals to work more closely with senior leadership to mitigate the negative outcomes (personal and organizational) of continued emotional suppression.

Additionally, HRD professionals are often expected to ensure that the "human resources" of the organization are operating at peak efficiency. One central mechanism for accomplishing this task is to provide feedback (Rummler & Brache, 1995). In other words, do organizational members get information about their performance? If senior leaders "express appreciation when people perform well" to little or no extent, it is reasonable to assume that people may not be getting positive feedback, if they get any feedback at all. In an internal consultant capacity, HRD professionals may be able to find ways to provide that positive feedback to employees and, in turn, help increase the overall level of organizational performance.

Many scholars and practitioners are now advocating that organizational learning is equally important to organizational performance in system survival (e.g., Bahlmann, 1990; Senge, 1990; Croswell, 1996). Recognizing employees for a job well done—again, showing appreciation for the performance of others—is very important to empowering employees in a learning organization (Watkins & Marsick, 1993). Watkins and Marsick (1993) also point out that supervisors play a central role in creating a learning organization by virtue of caring enough to work with employees to balance stressful conflicts between family and work. In other words, the ability to show care and concern for the employee through supervisor actions is vital to establishing a learning organization. Thus, emotional expressiveness may be considered important to facilitating organizational learning. Nevertheless, these implications of emotional expressiveness for HRD are implicitly drawn. Further study on a wide range of issues stemming from this research is certainly warranted.

Future studies should attempt to understand why senior leaders report such low expressiveness. Are they simply underestimating their expressiveness? Are they truly abdicating respsonsibility for support functions? If so, to whom are they delegating these functions? Are HRD professionals assuming this role? If these responsibilities are not being assumed by anyone in leadership, what are the ramifications for the well-being of the subordinates and for the organization itself? What can the HRD professional do to reduce potential negative ramifications? Also, further study should be conducted to incorporate both self and other reports of leadership among senior leaders. Finally, further study should be conducted to understand why the differences between male and female leaders occurred and if such differences can be replicated in another study.

References

Ashforth, B.E. & Humphrey, R.H. (1995). Emotion in the workplace: A reappraisal. Human Relations, 48(2), 97-125.

Bahlmann, T. (1990). The learning organization in a turbulent environment. Human Systems Management, 9(4), 249-256.

Boone, L.E. & Bowen, D.D. (1987). The great writings in management and organizational behavior. (2nd ed.). New York: McGraw-Hill, Inc.

Bryman, A. (1992). Charisma and leadership in organizations. Newbury Park, CA: SAGE Publications.

Clore, G.L., Ortony, A., & Foss, M.A. (1987). The psychological foundations of the affective lexicon. Journal of Personality and Social Psychology, 53(4), 751-766.

Conger, J.A. (1993). The brave new world of leadership training. Organizational Dynamics, 46-58.

Cooper, R.K. & Sawaf, A. (1997). Executive EQ: Emotional intelligence in leadership and organizations. New York: Penguin Putnam, Inc.

Cortina, J. (1993). What is coefficient alpha? An examination of theory and applications. Journal of Applied Psychology, 78(1), 98-104.

Croswell, C.V. (1996). Organizational learning in nonprofit organizations: A description of the action patterns of a professional association's governing network and leadership role in turbulent times. Unpublished doctoral dissertation, The George Washington University.

Davidson, R.J. & Cacioppo, J.T. (1992). New developments in the scientific study of emotion: An introduction to the special section. Psychological Science, 3(1), 21-22.

Davis, M.A., LaRosa, P.A., & Foshee, D.P. (1992). Emotion work in supervisor-subordinate relations: Gender differences in the perception of angry displays. Sex Roles, 26(11/12), 513-531.

Derryberry, D. & Tucker, D.M. (1992). Neural mechanisms of emotion. Journal of Consulting and Clinical Psychology, 60(3), 329-338.

Etzioni, A. (1988). The moral dimension: Toward a new economics. New York: The Free Press.

Gallois, C. (1993). The language and communication of emotion: Universal, interpersonal, or intergroup? American Behavioral Scientist, 36(3), 309-338.

Hochschild, A.R. (1983). The Managed Heart: Commercialization of Human Feeling. Berkeley: University of California Press.

Jones, E. & Gallois, C. (1989). Spouses' impressions of rules for communication in public and private marital conflicts. Journal of Marriage and the Family, 51, p. 957-967.

Notarius, C.I. & Levenson, R.W. (1979). Expressive tendencies and physiological responses to stress. Journal of Personality and Social Psychology, 37, 1204-1210.

Rosenbach, W.E., Sashkin, M. & Harburg, F. (1996). The Leadership Profile: On becoming a better leader. Seabrook, MD: Ducochon Press.

Rummler, G.A. & Brache, A.P. (1995). Improving performance: How to manage the white space on the organizational chart. (2nd ed.). San Francisco: Jossey-Bass Publishers.

Sashkin, M. (1981). An overview of ten management and organizational theorists. In J.E. Jones & J.W. Pfeiffer, Eds. The 1981 Annual Handbook for Group Facilitators. San Diego, California: University Associates, Inc.

Sashkin, M., Gorman, M.D., Higgins, C.,. Johnson, G.C., & Schwandt, D.R. (1995). Transformational leadership: A review and synthesis. Unpublished manuscript, The George Washington University.

Scherer, K.R. (Ed.) (1988). Facets of Emotion: Recent Research. Hillsdale, New Jersey: Lawrence Erlbaum Associates, Publishers.

Senge, P. (1990). The fifth discipline: The art and practice of the learning organization. New York: Doubleday Currency.

Shaver, P., Schwartz, J., Kirson, D., and O'Connor, C. (1987). Emotion knowledge: Further exploration of a prototype approach. Journal of Personality and Social Psychology, 52(6), 1061-1086.

Spector, P.E. (1992). Summated rating scale construction: An introduction. Newbury Park, CA: SAGE Publications.

Treddenick, H. (1955). The Ethics of Aristotle: The Nicomachean Ethics. (Rev. ed.) (J.A.K. Thomson, Trans.). New York: Penguin Books.

Ward, L.G. & Throop, R. (1989). The Dewey-Mead analysis of emotions. The Social Science Journal, 26(4), 465-479.

Watkins, K.E. & Marsick, V.J. (1995). Sculpting the learning organization: lessons in the art and science of systemic change. San Francisco: Jossey-Bass Publishers.

Weinberger, D.A., Schwartz, G.E., & Davidson, R.J. (1979). Low-anxious, high-anxious, and repressive coping styles: Psychometric patterns and behavioral and physiological responses to stress. Journal of Abnormal Psychology, 88, 369-380.

Yukl, G.A. (1981). Leadership in Organizations. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Global 100 Session: Linking HRD Practice and Research

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This session will provide an "action learning set" for all participants. This session will begin with identification of current business and HRD imperatives. Then, participants will break into small groups to work on selected imperatives. Discussion will include relevant research and theory and work that still needs to be done. For each imperative, participants will brainstorm research questions and available resources.

Comparing Quality Profiles of Training Organizations - A Multi-Level Approach

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Many training programs are purchased from training vendors. Client organizations compare the quality of the suppliers of these training programs. Comparing quality profiles of training organizations, however, should be done carefully. This study shows that ranking training organizations is depending on the statistical analysis used. A multi-level analysis of the data of over 1,300 training projects of 27 training vendors shows different results than a one-way Anova analysis. Variation in quality measures can almost completely be explained by the training projects, and not by the training organizations. The conclusion is that multi-level analysis should be employed for analyzing the quality of training organizations.

Problem statement and theoretical framework

Many organizations have concentrated on their core business during the last decade. This trend has been described and analyzed profoundly by Hamel & Prahalad (1994, 79), who contended that companies in the nineties will '... be judged on their ability to identify, and to exploit the core competencies that make growth possible - indeed, they'll have to rethink the concept of the corporation itself.' Organizations compete more and more based on their competence (Prahalad & Hamel, 1990; Hamel & Heene, 1994). Competence is becoming a valuable economic factor that determines an important part of the performance of organizations. Stewart (1997) even speaks about the intellectual capital of the organizations. Competence, and especially intelligence, is needed most in organizations with knowledge intensive production and services processes, like in banking and software engineering (Quinn, 1992). These organizations can be referred to as knowledge intensive organizations (Weggeman, 1997). The life cycle of knowledge in these organizations is decreasing fast.

Constant need for learning

This creates a constant need for learning. Senge (1990) and Argyris (1995) have shown that learning is strongly influenced by the way work processes are organized and by the learning culture. Within the concept of the learning organization, there is also a need for competence development, or knowledge development as Nonaka & Takeuchi in their influential publication of 1995 refer to it, by training. Certain communication and management skills, marketing and sales skills, and technological knowledge, can be trained efficiently by tested training programs. These programs are provided by literally thousands of local, regional, national and international training vendors. When concentrating on their core competence, many organizations have outsourced all kinds of support services, including training programs. They reorganized the training function and replaced training staff on a large scale. Some even closed their training department. Line management had to take the responsibility for employee development, a task that belongs to management, but that is not performed appropriately in many companies, as management has other priorities, and is not hold accountable for this task.

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Purchasing training services

As a consequence of this trend, organizations purchase more training programs than before, by which they are depending more and more on external training vendors. Purchasing training programs is a role that can be performed by different professionals (Nijhof, Mulder & Van Weele, 1995). Traditionally, this role was belonging to the training staff. But as this staff is reduced, replaced or outplaced to a large extent, the role of purchasing training programs is taken over by other professionals nowadays, such as internal HRD consultants. Or line managers, especially when they use their own budget to pay for the training program. Or professional purchasers, who are buying training programs and other services in combination with any other goods (like raw materials in the chemical industry or goods in the retail business). Critical HRD professionals state that these professional purchasers are over-estimating the price factor, because they have no expertise in the HRD profession, and their target is to maximize business results by reducing costs (just as the target of marketeers is to maximize business results by increasing sales) (Mulder & Bellemakers, 1997). A new phenomenon in the purchasing market is the training broker. This is either an individual who, or an organization that serves as a liaison between demand and supply in the training market.

In all cases, purchasers need to be able to select the appropriate training programs. The same holds for organizations that want to reduce the long list of training vendors with whom they are doing business. Lists of suppliers of some of these organizations have become so long, that it is practically impossible to manage them efficiently. One large industrial company, for instance, can have a long list of over 1,000 training suppliers, a list that needs to be cut down to a couple of hundreds (Mulder, 1996).

The problem of many organizations in this situation is how to get valid and reliable information about the quality of the training organizations. Many organizations have been using evaluations by the participants in training projects, but many organizations are getting aware of the limitations of that approach. They are increasingly focusing on the impact of training projects on the performance of individuals, teams and business units.

Quality management and independent evaluation of training projects

Training vendors have been anticipating this situation, and started quality programs and marketing campaigns in which they promised results and benefits of their training programs. Training vendors started to want to have the ISO certificate, others went on with internal quality improvement with still other quality management systems. In a while these certificates and quality management systems will not serve as unique selling points, because all training organizations will have got them or work with them. Furthermore, the purchasing field is professionalizing, so organizations will know (or have experienced) that training organizations may have got an ISO certificate, but still provide bad service: training without impact.

The marketing tool for training vendors that is most trustworthy at the moment, is the independent training project evaluation. This strategy has been adopted by a group of about 40 training organizations since the beginning of the nineties in the Netherlands. Large organizations can adopt this strategy to build their internal vendor rating system. The essence of this evaluation approach is that a random sample of training projects that are provided by a training organization is drawn, and that the quality of these projects is measured by an independent research organization. The results can be used to compare training vendors as to the value added to the organizations.

The model of independent training project evaluation developed for this group of training organizations will not be elaborated here, as it has already been described in various other papers before (see for instance Mulder & Van Ginkel, 1995; Mulder, 1996). What is needed here, to understand the essence of the model, is that customer satisfaction and impact are measured by administering a standardized questionnaire to a random sample of training project managers in client organizations.

Vendor rating; ranking performance of training organizations

Based on the data, training organizations can be compared. In earlier research, the total satisfaction indicator (TSI) was used for that. Training organizations were ranked on this indicator, although it did not discriminate well. This was caused by the homogeneity of the data (Mean = 7.77; Sd = 1.12; N = 2623; range of training organizations means: 7.15 - 8.38).

The ranking positions of the training organizations varied considerably over time.

It appeared, however, that the results of the training projects were less positive than total satisfaction scores. The data on the results of the training projects were distinguished in three levels: learning results, changed job performance, and achieved organizational change. To measure the amount of pre-defined objectives that were achieved at these levels, a 5-point question was asked for each result category. The results of this procedure are depicted in Table 1

Table 1 Means for the amount of which learning results (LR) are attained, work behavior (WB) is changed, and organizational change (OC) has occurred (N=number of evaluated projects; Sd=Standard Deviation) (range of scale: 1=minimum; 5=maximum)

	LR	*WB*	*OC*
Mean	3.77	3.29	3.06
N	2078	1699	1088
Sd	.84	.92	1.08

Compared with the TSI-data, that were measured on a 10-pointscale, the results (if converted to a 10-pointscale) are 7.6, 6.6 and 6.2, which is considerably less than the total satisfaction means.

To obtain a more valid indicator of the quality of the training projects, all quality indicators were aggregated in the so-called Aggregated Impact Indicator (AII). The following components are included in that indicator (between brackets the weights of the factors are given):

- total satisfaction (15);
- the corrected effect score, based on the amount of targets that are reached (targets are systematically differentiated in those that are aimed at acquiring new knowledge and skills, changing job performance, and contributing to organizational change), the importance of the targets, the responsibility of the training organization for reaching those targets, and the attribution of the results to the training organization (40);
- the realization of expectations (15);
- making agreements about the delivery conditions (10);
- delivery reliability (10);
- the satisfaction about the implementation of the project according to the delivery conditions (10).

The descriptive data of the AII are: mean = 65.8; N = 1756; Sd = 13.5. The range of training organization means is 56.0 - 73.8.

The corrected mean

The quality of HRD processes in client organizations varies considerably. Organizations have difficulties in aligning processes at different system levels, and linking HRD processes to corporate strategy building and human resource management (Wognum & Mulder, 1997). Furthermore, in many customized training projects, client organizations and suppliers are co-makers. Both have their role in achieving results of the training projects. Given these facts, it would be unfair to attribute results of training projects to training organizations, without taking the responsibility of the client organizations in achieving the results of these training projects into account. Therefore, the second component of the AII is corrected for the variation in responsibility of client organizations for achieving results of the training projects.

Using the AII in the way it has been done until now, however, neglects the fact that it is tried to infer the quality of training organizations based on training projects. This is a typical case of a multi-level problem. Using multi-level models and analysis techniques have become common place in inferring quality of educational institutions based on student outcomes. Without using those techniques, a systematic error is included in the methodology.

Research questions

The first research question is: are the ranking orders of training organizations statistically meaningful?

The second research question is: to what correction does a multi-level analysis technique lead in the ranking of training organization when their quality is inferred using evaluation data of training projects?

When this correction is known, researchers can account for this in future quality comparisons of training organizations.

Methodology

The population of this study consists of the customized training projects delivered by a group of about forty training companies in the Netherlands. The research units consist of individual training programs. The sample is randomly drawn from the population (about 15,000 projects), and is about 30% of the population. The participation in the study is about 60% (of the sample), resulting in 2,624 evaluated projects. The evaluation is accomplished in five phases, beginning in 1993. In each phase, projects were evaluated that were completed in a given half year. The half years are the following: 93-2, 94-1, 94-2, 95-2, and 96-2. The data are scrutinized for sampling bias by conducting non-response research during the first phase. Furthermore, the reliability of the data is studied by inter-rater and test-retest reliability analyses during the same time. These analyses showed that the differences were so small that they could be neglected (Mulder, Van Ginkel & Nijhof, 1994). The research instrument is validated and standardized in a pilot project in 1993, and presented in earlier papers. The systems model that serves as the conceptual framework for the instrument is tested for fit by a Lisrel-analysis (Mulder, 1996). The conclusion of this analysis is, that the model fits, except for projects that are aimed at supporting organizational change. Those projects have a long term effectiveness cycle in most instances, and their success relies more on the effort of the client organization that of the training organization.

For this paper a selection is made of the available data. Because the research instrument for the 94-1 measurement period was changed for some variables, the data of 93-2 were excluded from the analysis. Furthermore, the cases with partial non-response on TSI and AII were deleted. Finally, the training organizations that left the association and those that became member after the first or later measurement period were excluded from the analysis. Data of 27 training organizations and 1348 projects were left.

Analyses of variance are performed for TSI and AII with the training organization being the independent variable. The same is done for the project results (learning results, job performance and organizational change). This is done to present preliminary conclusions on the ranking of training organizations.

Next, the multi-level analysis of the data is conducted. The basic expression for multi-level analysis is used. This expression is:

$Y_{ij} = Y_{00} + U_{0j} + e_{ij}$

Y_{ij} = score of respondent i on project j;

Y_{00} = general mean of all respondents on all projects;

U_{0j} = mean score of training organization j;
e_{ij} = error component of respondent i per project j.

This means that the individual score of a respondent on a project is a function of the total mean score of all respondents on all projects, the mean score of different respondents for the respective training organization, and an individual error component. Furthermore, the group of training organizations in the study, is seen as a random sample from the population of training organizations.

Table 2 Results of one-way ANOVA analyses with TSI (Total Satisfaction Indicator), AII (Aggregated Impact Indicator), Learning Results, Job Performance and Organizational Change as dependent variables, and training organization (n = 27) as categorizing variable.

	Sum of Squares	*df*	*Mean Square*	*F*	*Sig.*
TSI					
Between Groups	4.536	26	1.328	1.038	.412
Within Groups	1690.796	1321	1.280		
Total	1725.332	1347			
AII					
Between Groups	8661.961	26	333.152	1.908	.004
Within Groups	230616.360	1321	174.577		
Total	239278.320	1347			
Learning Results					
Between Groups	33.916	26	1.304	1.926	.004
Within Groups	822.748	1215	.677		
Total	856.663	1241			
Job Performance					
Between Groups	29.852	26	1.148	1.409	.085
Within Groups	807.653	991	.815		
Total	837.505	1017			
Organizational Change					
Between Groups	28.429	26	1.093	.908	.598
Within Groups	712.880	592	1.204		
Total	741.309	618			

Results

The results of the analyses of variance (one-way Anova) are presented in Table 2.

The preliminary conclusion is a confirmation of what was expected: TSI is no discriminating factor. Earlier rankings of training organizations on this variable are statistically meaningless.

On the other hand, AII shows significant differences between training organizations. Based on this analysis, the preliminary conclusion would be that the ranking of training organizations based on AII would indeed be meaningful.

The multi-level analysis results are depicted in Table 3.

Table 3 Multi-level analysis results for TSI (Total Satisfaction Indicator) and AII (Aggregated Impact Indicator); level 1 = Training Project; level 2 = Training Organization (Note: this is a random effects model; the intercept is estimated)

	Estimate	*S.Error (U)*	*z*	*q*
TSI				
Intercept	7.838	.03087		
Level:				
2 Training Organization	0.0	0.0	0.0	.50
1 Training Project	1.233	.04849	25.43	<.01
AII				
Intercept	66.18	.4887		
Level:				
2 Training Organization	2.689	1.737	1.548	<.06
1 Training Project	174	6.91	25.18	<.01
Learning Results				
Intercept	3.823	.0334		
2 Training Organization	.0142	.008135	1.78	<.05
1 Training Project	.6767	.02796	24	<.01
Job Performance				
Intercept	3.365	.03925		
Level:				
2 Training Organization	0.0	0.0	0.0	.50
1 Training Project	.08011	.04968	16.13	<.01
Organizational Change				
Intercept	3.096	.04945		
Level:				
2 Training Organization	.003313	.01754	.19	.39
1 Training Project	1.201	.07633	15.73	<.01

The results of the multi-level analyses can be viewed in two ways. First of all, for the TSI, the variance is largely explained by the Training Projects, which is significant at the .01 level. But no variance in TSI is explained by Training Organizations. This means that all variance in the data on TSI is explained by differences in Training Projects. This is consistent with the earlier one-way Anova analysis for TSI. For the AII, the variance is explained by Training Project and Training Organizations both, although the level of the Training Organization is significant at the .10 level.

Secondly, we can look at the amount of variance explained by by both Training Projects and Training Organizations. For TSI we see that 100% of the variance is explained by Training Projects. For AII 98% of the variance is explained by the Training Projects. This puts the results in a totally different perspective. For the one-way Anova-analysis results for AII showed significant differences for training organizations.

Conclusions

The first research question was: are the ranking orders of training organizations statistically meaningful? Based on this study, the answer is: it depends ... There are considerable differences between one-way-Anova analysis, and the multi-level analysis results. Based on the multi-level analysis, the answer on the first research question is, that ranking of training organizations based on the TSI and AII is not meaningful enough. The amount variance of both variables that is explained by training organizations is 0% for TSI and 2% for AII.

The second research question was: to what correction does a multi-level analysis technique lead in the ranking of training organization, when their quality is inferred using evaluation data of training projects? The answer to this question is, that these data do not allow ranking of training organizations based on TSI or AII.

Do these conclusions affect the feedback in the benchmark reports that was given earlier to the training organizations? Yes and no. It means that training organizations will pay less attention to rankings that were presented earlier. No, because many training organizations already observed the minimal differences between the organization means. These minimal differences made the ranking very vulnerable for minor changes in means. Ranking differences for TSI were also already attributed to regression to the mean (which is a plausible reason, because of the ceiling effect of the data on TSI).

The results are a stimulus to analyze the characteristics of the training projects further, to see what aspects of the training projects are responsible for the variation in AII.

Apart from that, it is necessary to further analyze the components of AII with a factor analysis.

So this study shows that the value of quality ranking is contingent upon the statistical analysis procedure used. Earlier differences between the TSI and AII rankings already indicated this. In this study, using the multi-level analysis technique lead to different results and interpretations than those of a straightforward one-way Anova analysis. Quality comparisons should account for these differences. Purchasers of training programs need to be aware of the importance of the analysis techniques used, as flawed data may lead to wrong decisions.

As many studies infer quality of organizations from the project level, this means that if they do so, they will all need to employ multi-level analysis techniques. That will be a challenge for many researchers in the field of HRD.

References

Argyris, C. (1992). *On Organizational Learning*. Oxford: Blackwell.

Hamel, G. & Heene, A. (1994). *Competence Based Competition*. Chichester: Wiley.

Hamel, G. & Prahalad, C.K. (1994). *Competing for the Future*. Boston: Harvard Business School.

Mulder, M. (1996). Customer Satisfaction About Training Programs. Independent Project Evaluation for an Association of Training Organizations. Designing the Future - Training and Development in the 21st Century. *Proceedings of the 25th IFTDO World Conference*, 4-7 November, Egypt. Cairo: Team International, p. 3-28.

Mulder, M. (1996). Customer Satisfaction and Training Program Quality. Holton III, E.F. (Ed.) *Academy of Human Resource Development 1996 Conference Proceedings*. Austin: AHRD, p. 688-695.

Mulder, M. (1996). Inkopen van opleidingen: een interdisciplinair organisatieprobleem (Purchasing training: an interdisciplinary organizational problem). *Opleiding & Ontwikkeling* (Training & Development) 9, 12, 9-19.

Mulder, M. & Ginkel, K. van (1995). *Quality evaluation of training programs*. ECER 95. European conference on Educational Research. Bath: University of Bath, p. 79.

Mulder, M., Ginkel, K. van & Nijhof, W.J. (1994). Customer Satisfaction Research as a Component of Quality Assurance within In-Company Training. *Tijdschrift voor Onderwijswetenschap* (Journal for Educational Science), 24, 2/3, 59-76.

Mulder, M. & Bellemakers, M. (1997). *Inkopen van opleidingen* (Purchasing training). Peters, J.J., Ommeren, R. van & Thijssen, J.G.L. (Red.). *Gids voor de Opleidingspraktijk* (Guide for the HRD Practice). Deventer: Kluwer Bedrijfswetenschappen. (in press).

Nonaka, I. & Takeuchi, H. (1995). *The Knowledge-Creating Company. How Japanese Companies Create the Dynamics of Innovation.* New York: Oxford University Press.

Prahalad, C.K. & Hamel, G. (1990). The Core Competence of the Corporation. *Harvard Business Review*, May-June, 79-91.

Quinn, J.B. (1992). *Intelligent Enterprise. A Knowledge and Service Based Paradigm for Industry.* New York: Free Press.

Senge, P.M. (1990). *The Fifth Discipline; The Art & Practice of The Learning Organization.* New York: Doubleday.

Stewart, T.A. (1997). *Intellectual Capital. The New Wealth of Organizations.* New York: Doubleday.

Weele, E.M. van, Mulder, M. & Nijhof, W.J. (1995). *De inkoper van bedrijfsopleidingen: een profiel* (The Purchaser of Training: A Profile). De Lier: Academisch Boeken Centrum.

Weggeman, M. (1997). *Kennismanagement: inrichting en besturing van kennisintensieve organisaties* (Knowledge Management: Organization and Management of Knowledge Intensive Organizations). Schiedam: Scriptum.

Wognum, A.A.M. & Mulder, M. (1997). Strategisch opleiden. (Strategic HRD). *Tijdschrift voor Hoger Onderwijs* (Journal for Higher Education*)* (accepted for publication).

HRD Service-Management Model

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This paper proposes a model to help conceptualize the relationship between the HRD function and other organizational functions, which receive the services of the HRD function. The model is adapted from the Gap Model, which is well-recognized in the marketing and service-quality literature. The proposed model seeks to identify potential disconnects which may occur within the HRD function and during interactions with customer functions. Such information has important implications for HRD research and practice.

The management of human resource development (HRD) functions has received limited attention by HRD researchers. Nevertheless, the importance of HRD management cannot be overemphasized, given the increased role of HRD in most organizations. Simply put, managing the HRD function has much to do with the ultimate effectiveness of whatever HRD programs are implemented by that function. In general, the literature on managing the HRD function has been characterized by two major perspectives.

First, the literature on the topic has sought to address the professional competencies of the HRD manager role. Underlying this research has been the assumption that HRD effectiveness in organizations is determined, to a large extent, by the competence of the professionals involved (Hale, 1991; McLagan, 1989). Thus, HRD effectiveness is based on the notion of personal competence. Second, the literature on the topic has sought to position the HRD function in a way which makes it potentially compete with other functions in organizations, suggesting that HRD function ought to be presented in the most attractive way possible (Gilley & Eggland, 1992). Thus, HRD perception of effectiveness is based primarily on a marketing model.

Although the present literature on this topic has contributed much to the field, the information has not addressed some of the more fundamental issues related to HRD management, nor has the literature been able to respond to emerging challenges related to accountability in organizations. For instance, the literature does not address how to understand the relationship between HRD and other organizational functions which receive HRD function's services. Part of the reason is that most of the present literature is, essentially, atheoretical in nature. That is, the literature views HRD management as an organizational phenomenon, which often needs to be experienced firsthand before it can be fully understood to any extent. Clearly, the risk in this approach is that individual experiences may differ, and whatever knowledge is gained by individuals cannot be generalized across organizational situations.

If HRD effectiveness is linked to managing the HRD function, and if the literature on HRD management lacks a theoretical base, which may inhibit addressing critical issues such as HRD's relationships with other organizational functions, then new models are required to move understanding of this aspect of the HRD literature forward. This paper proposes a model for managing the HRD function within the same framework regardless of the type of HRD service. Specifically, the model presented here is an adaptation of a model in the service-quality literature (Parasuraman, Zeithaml, & Berry, 1985).

Conceptual Background

Quality of products has long been the subject of research and practical interest in organizations. In contrast, the quality of services is a relatively new area of scholarly and practical discussion. As a result, several authors have developed models specifically related to service quality. Perhaps

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some of the most influential works have been by researchers from the marketing field, such as Parasuraman, Zeithaml, and Berry (1985;1988; 1991), Parasuraman and Berry (1990). Their work has resulted in what is known as the "Gap Model," which represents five major potential discrepancies that may occur during any service-delivery process. In various ways, these gaps can inhibit the perceptions of customers about those providing the service.

The Gap Model originates from the disconfirmation paradigm which suggests that the service supplier as well as the service recipients need to have consistent expectations and evaluations for a successful service exchange to occur (Swartz & Brown, 1989). By understanding the perceptions of each party, areas for potential congruence can be identified. Strategies to eliminate these inconsistencies can them be developed and implemented, thus increasing the likelihood of customer satisfaction with the HRD outcome and improving the organization's overall performance. Generally speaking, satisfaction occurs when outcome meets or exceeds the consumers' expectations. Similarly, dissatisfaction occurs when a negative discrepancy develops between the customer's anticipated outcome and actual outcome.

There has been some interest in the HRD literature about the service role of the HRD function. Grimm (1990) states that traditional HRD functions are often too narrow in scope and recommends instead that they take on a more proactive service orientation, within the context of the needs of the organization. HRD programs should be based on the principle of internal customer satisfaction. Studies have shown that satisfied internal customers are a critical prerequisite to the satisfaction of external customers and the overall success of organizations (Berry & Parasuraman, 1991; Gronroos, 1985; Heskett, 1987, Schlesinger & Heskett, 1991).

Furthermore, in most organizations HRD initiatives have not succeeded in addressing proper causes of performance deficiency since most were undertaken without a solid understanding of a holistic view of the organization. In many failed change initiatives, internal and external consultants were implementing the latest turnaround fads. Subsequently, they caused major social, human and financial costs. A well-planned and executed HRD service management model ensures the integration of HRD process with all the other stakeholders.

If a performance discrepancy at the individual, process or the organizational level is perceived as a problem in need of an HRD intervention, then an HRD service process must be planned, developed, delivered and evaluated. If the intervention is at the individual level (for example, structured on- the-job training), then the individual employee is the HRD service recipient. However, the impact of HRD service should be assessed at the performer level as well as the process level. If the HRD intervention is at the process level, then some or all the process participants are the recipients of the HRD service (i.e., customer service process). The evaluation at this level should include not only the impact on other processes interfacing with this process, but also the HRD service impact should be assessed at the organizational level as well. If the HRD intervention has to be executed at the organizational level (for example, organizational development), then the entire organization is the recipient of the HRD service. The evaluation in this level may include the external customer, as well as the community or the industry in which the organization functions.

In the same way, the Gap Model focuses on customer satisfaction resulting from service delivery, but the emphasis is on external customers outside of the organization. Of necessity, adapting the Gap Model to HRD management requires it to focus on the satisfaction of internal customers.

The HRD Service-Management Model

Figure 1 presents the proposed HRD Service-Management, which has been adapted from the Gap Model. The figure shows that there are boundaries between HRD function and other functions in the organization. The figure also demonstrates that there are potential gaps on the HRD side as well as the HRD receiver's side.

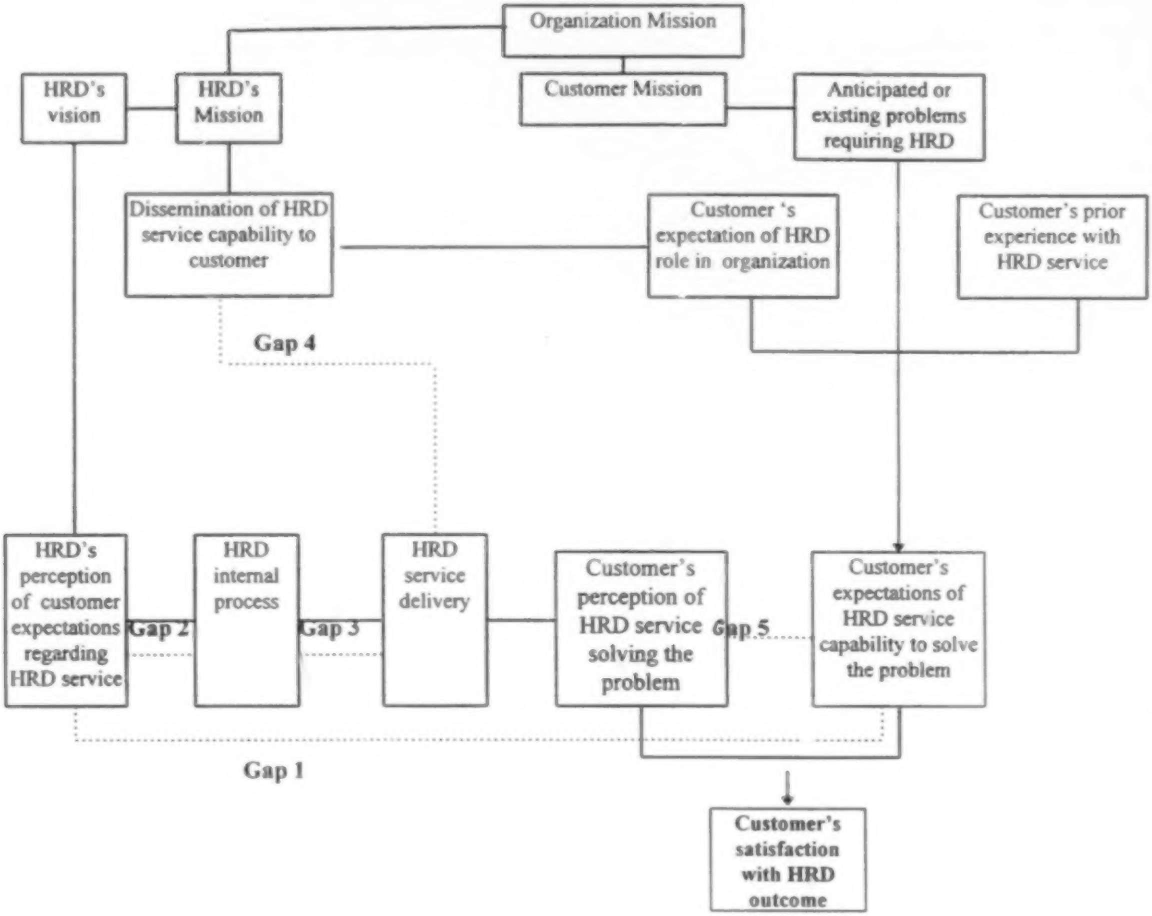
Organization Mission
HRD's vision
HRD's Mission
Customer Mission
Anticipated or existing problems requiring HRD
Dissemination of HRD service capability to customer
Customer 's expectation of HRD role in organization
Customer's prior experience with HRD service
Gap 4
HRD's perception of customer expectations regarding HRD service
HRD internal process
HRD service delivery
Customer's perception of HRD service solving the problem
Customer's expectations of HRD service capability to solve the problem
Gap 2
Gap 3
Gap 5
Gap 1
Customer's satisfaction with HRD outcome

Figure 1- The HRD Service-Management model

The HRD service-management model starts out with the organizations' mission that transcends into different functions' mission. The objectives mandated by the mission statement can then be used to establish performance requirements for each function at the three levels of performance: organization, process, and job/performer (Rummler & Brache, 1995). Although the

HRD process parameters (i.e., methodology, structure and outcome) are different from case to case, the HRD service-management model allows their management within a common framework.

The customers of the HRD function have certain performance outcomes that need to be achieved in support of the organization mission. Prior experience with HRD services, internal customer perception of HRD's role in the organization, and a perceived performance gap impact customer's expectations of HRD's ability to help. On the other hand, HRD, as an internal service provider, has certain perceptions of its customer's expectations. These perceptions are based on HRD's vision, or how it sees itself in regards to the organization, and its ability to effectively gather pertinent information. This perception, in turn, sets the framework for the HRD internal process. If this perception is very different from the customers' expectations, which is shown in Gap 1, then the HRD outcome regardless of staff competence, appropriate marketing and excellent delivery will not result in the desired performance improvement. Similarly, Gap 2 is the discrepancy between HRD management and staff perceptions of what features constitute a target level of HRD service quality and the task of translating these perceptions into workable programs. If this discrepancy is large, then the service process will fall short of its objective. The existence of Gap 3 demonstrates the discrepancy between HRD process specifications and how well those specifications were implemented. Again, a wide gap here is a detriment to HRD function's delivery.

One part of HRD's responsibilities is the dissemination of information regarding its capability and credibility to the rest of the organization. This information affects customer's expectations as well as their perception of the HRD outcome afterwards. Gap 4 involves the difference between HRD's internal marketing and the actual HRD service delivery. The customer should not be promised a certain type, and level of service if it cannot be achieved. Here is where a holistic service management approach is far superior to the traditional way of managing the HRD function. A summary of the gap definitions are provided in Table 1.

Table 1- Gap Definitions in the HRD Service-Management Model

Gap 1: Difference between customer expectations of HRD's capability in solving the performance problem and HRD management's perception of those expectations.

Gap 2: HRD management and staff perceptions of how customers' expectations have been translated to HRD internal processes.

Gap 3: HRD management and staff perceptions of how the decisions on HRD 's internal processes have been operationalized in the HRD service delivery.

Gap 4: HRD management and staff perceptions of how the HRD 's dissemination of its capabilities have been operationalized in the HRD service delivery.

Gap 5: Difference between customer's expectations of HRD's capability to solve the performance problem and his/her perceptions of the service quality afterwards. If the mean difference is negative, it indicates that expectation score exceeded perception score, and therefore the customer is dissatisfied. If the mean difference is positive or zero, it means the customer is satisfied with the HRD outcome.

All HRD services have three important dimensions: analysis, intervention and evaluation. (Torraco, 1995). Analysis dimension includes the assessment of customer's expectations, and their feasibility vis a vis the organizational constraints. The intervention dimension constitutes the implementation phase where the translation and operationalization of customer's expectations into HRD programs or interventions occur. The evaluation phase of HRD is when measures are set for assessing the HRD outcome vis a vis the desired performance improvement. Specifically, HRD outcomes are assessed to see if they add any value through transfer of learning into improved job performance in the immediate, near- or long-term time frame. It seems that the HRD service-management model by using the gap analyses allows for more clarity and accountability among the three phases of the HRD service. Additionally, HRD outcome at lower level of the organization should not only be assessed in that level, but also be assessed at higher levels as well (McClernon,1995). This truly integrates the systems view with the traditional way of evaluating HRD effectiveness. HRD outcomes need to be further transformed through retention, reinforcement, and other supportive activities (Brinkerhoff, 1992).

Implications for HRD Research

There are at least three implications of the model for HRD research, which presumably will benefit practice. First, clearly there is a need to validate the model. Any confidence in the usefulness of the model must be based on rigorous research. Much of this research should validate the actual existence and the expected consequences of the identified gaps. Such information will more clearly delineate how professional actions might be taken, given various organizational circumstances related the HRD function. Second, further research is needed to understand how factors such as management commitment and involvement in the HRD function serve to shape expectations of customer functions and, thus, satisfaction levels about HRD outcomes. The third implication is the impact of the various intervening variables on the transfer of HRD service outcomes to HRD customer's job. HRD practitioner must understand that HRD responsibilities for outcome must be shared by all stakeholders. While the HRD function customers have the ultimate responsibility for acquiring the knowledge , skills and attitude, and maintaining the motivation to transfer those to every-day operation, these outcomes require a supportive management environment. An ideal organizational climate not only delivers the HRD customer with the appropriate HRD intervention, at the right time, but it also ask for accountability for performance improvement from the manager, co-workers and the entire organization. To have a well-managed HRD process, HRD manager must design HRD internal processes with an eye on outcome while asking for support and involvement from all the key stakeholders.

References

Berry, L. L. and Parasuraman, A. (1991). *Marketing services: Competing through quality.* New York, NY: Free Press.

Brinkerhoff, R. O., and Gill, S. J. (1992). Managing the total quality of training. *Human Resource Development Quarterly,* 3 (2), 121-129.

Cassidy, M. F., Barthelme, K. C., Schimmel, B. J., and Rodriguez, J. (1994). Understanding quality in training and education services. *Performance Improvement Quarterly*, 7 (4), 70-87.

Cassidy, M. F., Schimmel, B. J. and Brady, K. A. (1993). Identifying expectations for service quality in training and education through process needs assessment. *Performance Improvement Quarterly,* 6 (2), 3-16.

Collier, D. A. (1994). *The service/ quality solution.* Burr Ridge, IL: Irwin Professional Publishing.

Gilley, J. W. and Eggland, S. A. (1992). *Marketing HRD within organizations.* San Francisco, CA: Jossey-Bass Publishers.

Gremler, D. D. and Bitner, M. J. (1994). The internal service encounter. *International Journal of Service Industry Management,* 5 (2), 34-56.

Gronroos, C. (1985). Internal marketing-theory to practice. In Bloch, T. M., Upah, G. D. and Zeithaml, V. A. (Eds). *Service marketing in changing environment.* American Marketing Association, 41-47.

Hale, J. A. (1991). Identification of key competencies of managers of training. *Dissertation Abstracts International,* 52 (7). 2389-A.

Heskett, J. L. (1987). Lessons in the service sector. *Harvard Business Review*, 65 (2), 118-126.

McLagan, P. A. (1983). Models for excellence: The conclusions and recommendations of the ASTD training and development study. *American Society for Training and Development.*

Parasuraman, A., Zeithaml, V. A. and Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing,* 49 (4), 41-50.

Parasuraman, A. , Zeithaml, V. A. And Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64 (1), 12 - 37.

Parasuraman, A. and Berry, L. L. (1990). Five imperatives for improving services. *Sloan Management Review,* 31 (4), 29-38.

Parasuraman, A., Zeithaml, V. A. , and Berry, L. L. (1991). Perceived service quality as a customer-based performance measure: An empirical examination of organizational barriers using an extended service quality model. *Human Resource Management.* 30, (3). 335-364.

Rummler, G. A. and Brache, A. P. (1995). *Improving performance : How to manage the white space on the organization chart.* 2nd ed. San Francisco, CA: Jossey Bass.

Schlesinger, L. A. and Heskett, J. L. (1994). Putting the service profit chain to work. *Harvard Business Review*, 72 (2), 164-174.

Swartz, T. A., and Brown, S. W. (1989). Consumer and provider expectations and experiences in evaluating professional service quality, *Journal of the Academy of Marketing Science,* 17 (2), 189-195.

Torraco, R. J. (1995). HRD alignment: A systemic assessment of HRD in organizations. *Proceedings of the Academy of Human Resource Development* (12-1).

Vandermerwe, S. and Gilbert, D. (1991). Internal services: Gaps in needs/performance and prescriptions for effectiveness. *International Journal of Service Industry Management*, 2 (1). 50-60.

Zeithaml, V. A., Parasuraman, A. and Berry, L. L. (1990). *Delivering quality service*. New York, NY: The Free Press.

Zeithaml, V. A., Berry, L. L. and Parasuraman, A. (1988). Communication and control processes in the delivery of service quality. *Journal of Marketing*, 52 (2). 35-48.

A Phenomenological Study of the Strengths, Weaknesses, Limitations, and Future Trends of Training and Performance Technology

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Abstract: This study considered opinions of key leaders in training and performance technology in the S. E. Michigan area. The leaders are associated with the automotive / truck vehicle industry, either as automotive companies, direct or indirect suppliers. The study defined the present and future state of training and performance technology for the purpose of validating curriculum or making changes to the Adult Instruction and Performance Technology masters degree program at University of Michigan - Dearborn.

Practitioners in the Human Resource Development (HRD) field are facing rapid changes due to globalization of the economy and increased use of technology and information (Harman & Porter, 1997; Rhinesmith, 1997). As a result, HRD is broadening its focus from training and skill development to consistently demonstrating improved performance on the job (Rothwell, 1996; Galagan, 1995; Trawick, 1996). In order to increase productivity and remain competitive, senior management is requiring demonstrated positive return-on-investment and obvious organizational benefit from HRD investments (Pizzimenti, 1997; Dick, 1997; Fitz-Enz, 1990; Spencer, 1986). As the world migrates to a knowledge era, HRD practitioners need to lead the transition to continuous learning in a learning organization (Senge, 1990).

Increasingly, organizational leaders are realizing that human competencies are key to maintaining productivity and global competitiveness (Van Tiem & Doyle, 1998). Yet, organizations find it less difficult to secure funds to purchase equipment than finance activities designed to achieve a highly performing workforce (Apking, 1997). Underdeveloped global regions are focusing on technical skills, while the United States is emphasizing leadership competencies necessary to retain world-class status (McLagan, 1997). In line with this new attention to human capital and information issues, the American Society for Training and Development (ASTD) redefined HRD professional skills, knowledges, and attitudes (SKAs) broadly as performance improvement competencies leading to results or outputs (Rothwell, 1996).

It is incumbent upon universities and colleges to evaluate their graduate and undergraduate HRD programs to ensure that graduates are capable of functioning effectively in the changing information and knowledge-oriented workplace environment. Graduates must possess the necessary competencies to assume the broadening human performance improvement roles (Dick, 1997).

Historically, University of Michigan - Dearborn (UM-D) has been closely linked to the local community. UM-D originated to serve the educational needs of the local labor market and remains committed to continuing that tradition. The campus was established in 1956 through a gift from Ford Motor Company, based on studies of manpower supply conducted by Mr. Archie Pearson, director of training for Ford Motor Company in the middle 1950's. He was convinced that serious shortages were looming for qualified, college-trained engineers and junior administrators (University of Michigan - Dearborn, 1996). As a result of this local orientation, it was appropriate to validate the ASTD Models for Human Performance Improvement: Roles, Competencies, and Outputs (1996) and adapt the curriculum, as necessary, for local needs.

In addition, training and development and performance technologist newspaper job advertisements are tracked to monitor job requirements and job descriptions (Lapides, 1997). The most common job advertisement is for computer technical trainers, able to teach and consult on standard computer software. Training job titles are common and performance technology job titles are less frequent, but increasing in occurrence. This suggests a disparity of emphasis between the ASTD Models for Human Performance Improvement: Roles, Competencies, and Outputs (1996) and the S. E. Michigan labor market. For instance, ASTD does not list training as a separate competency, but as an aspect of performance technology interventions. In addition, phone

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inquiries from organizations desiring to hire students as interns or full-time employees are similar to the job classified advertisements, with jobs predominantly for training specialists, training consultants / performance technologists in vendor organizations, or computer trainers. This UM-D research study was designed to further understand the local job market to ensure that graduates from the Adult Instruction and Performance Technology masters program are fully prepared.

The University of Michigan - Dearborn is in the process of evaluating the Adult Instruction and Performance Technology (AIPT) masters degree program, in the School of Education. Initially, a matrix (See Table 1.) was created comparing the 1996 ASTD roles and competencies to existing course objectives. Following review by the AIPT faculty, possible new courses were added to the matrix documenting potential course objectives. The AIPT advisory committee, consisting of training and performance improvement leaders in the S. E. Michigan community, evaluated the current curriculum and also proposed changes.

Research Questions

The University of Michigan - Dearborn funded this qualitative research study to interview key training and performance improvement leaders in the S. E. Michigan area to determine actual workplace needs in the likely labor market for the graduates of the Adult Instruction and Performance Technology masters program. These interviews provided information (1) to validate the proposed direction for the Adult Instruction and Performance Technology masters program, based on the ASTD Models for Human Performance Improvement: Roles, Competencies, and Outputs (Rothwell, 1996) and (2) to make appropriate changes to meet S. E. Michigan job market needs.

This University of Michigan - Dearborn funded research considered the following three questions relative to S. E. Michigan:

1. What are the strengths, weaknesses, limitations, and future trends of training and performance technology?
2. What is the relationship between employer and individual employee's responsibility for training and performance improvement?
3. What learning alternatives are in use and to what degree?

Method

Design This phenomenological research considered current opinions of twenty leaders in the training and performance technology field, through structured telephone interviews by the researcher and research assistant, Maureen Haas. Although time-consuming, interviews seemed to be the best way to gather anecdotal data and supplementary comments. Each interview took between 30 and 60 minutes. Questions were paraphrased while scheduling the interview or sent ahead enabling the interviewee to be familiar with the topics and prepared to respond.

Subjects The twenty interviewees are current well-respected practitioners in the training and human resources community in S. E. Michigan area, or leading professionals in training and performance technology vendor companies that service the S. E. Michigan community. Interviewees are employees in the automotive and truck vehicle industry (such as General Motors and Ford) or their Tier One direct suppliers (such as vehicle components) or indirect suppliers (such as training vendors or financial institutions). These organizations were chosen because S. E. Michigan's economy is dominated by the automotive companies. Vendors were instructed to provide information about their client organizations in S. E. Michigan, especially automotive / truck vehicle-related clients. Vendors were included in the interview sample because so many training and performance technology interventions are outsourced or co-designed, developed, and implemented.

Table 1. Curriculum Matrix	*Multi-Cult*	*Adult Lrnr*	*Research*	*Strat Plan*	*Methods*	*ISD*	*Eval*	*Gaming /Simult*	*Multi Media*	*Distance Lrng*	*Fin &Econ*	*Org Beh*	*Consult*	*Lrng Org*
ASTD CORE COMPETENCIES														
1. Industry Awareness						x					x		x	
2. Leadership Skills	x										x	x		
3. Interpersonal Relationship Skills	x											x		x
5. Problem-Solving Skills				x							x		x	
6. Systems Thinking				x		x					x			x
7. Performance Understanding		x			x	x	x				x		x	x
8. Interventions Knowledge					x	x		x	x	x	x		x	x
9. Business Understanding				x		x					x	x	x	x
10. Organizational Understanding	x			x				x	x	x	x	x		x
11. Negotiating/Contracting Skills						x					x		x	
12. Buy-In/Advocacy Skills				x							x		x	x
13. Coping Skills	x	x									x	x		
15. Consulting Skills				x			x				x	x	x	x
ASTD ROLE 1: Analyst Competencies														
16. Performance Analysis Skills		x	x	x	x						x		x	x
17. Needs Analysis Survey Design and Development Skills				x		x	x				x		x	
18. Competency Identification Skills							x				x		x	x
19. Questioning Skills	x	x	x	x	x	x	x	x				x	x	x
20. Analytical Skills	x	x	x	x	x	x	x	x				x	x	x
21. Work Environment Analytical Skills	x	x		x	x	x	x	x	x	x	x	x	x	x
ASTD ROLE 2: Intervention Specialist Competencies														
22. Performance Information Interpretation Skills	x	x		x	x	x	x	x	x	x	x	x	x	x
23. Intervention Selection Skills	x	x		x	x	x	x	x	x	x	x	x	x	x
24. Performance Change Interpretation Skills	x	x		x	x	x	x	x	x	x	x	x	x	x
25. Ability to Assess Relationships among Interventions		x		x	x	x	x	x	x	x	x	x	x	x
26. Ability to Identify Critical Bus Issues & Changes	x	x		x	x	x	x				x	x	x	x
27. Goal Implementation Skills	x	x	x	x	x	x	x	x	x	x	x	x	x	x
ASTD ROLE 3: Change Manager Competencies														
28. Change Impetus Skills	x	x		x	x	x	x	x	x			x	x	x
29. Comm Channel, Informal Network, & Alliance Und	x			x		x		x	x	x	x	x	x	x
30. Group Dynamics Process Understanding	x							x	x	x		x	x	x
31. Process Consultation Skills	x	x		x	x	x					x	x	x	x
32. Facilitation Skills					x			x					x	x
ASTD ROLE 4: Evaluator Competencies														
33. Performance Gap Evaluation Skills		x	x	x	x	x	x	x	x	x	x			
34. Ability to Evaluate Results against Org Goals	x		x	x			x	x	x	x	x	x	x	x
35. Standard Setting Skills	x	x		x	x	x	x	x			x	x	x	x
36. Ability to Assess Impact on Culture	x	x	x	x	x		x				x		x	x
37. Human Perf Improvement Intervention Reviewing Skills		x	x	x	x		x	x	x	x	x	x	x	x
38. Feedback Skills	x		x		x	x	x					x	x	x

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Data Analysis Interviewee statements were categorized and recorded verbatim or paraphrased as notes into the database. Interview data were summarized into tables in a MS Access software database. The researcher chose this software because AIPT students need to be competent in MS Office software, based on internship exit interviews. In addition, the researcher discussed database and statistical analysis issues with William Rothwell, author of ASTD Models for Human Performance Improvement: Roles, Competencies, and Outputs (1996), prior to software selection, and MS Access was his software recommendation.

Data Reporting Due to the required length of this paper for the 1998 AHRD conference proceedings, leader's opinions are reported in an abbreviated text format. However, complete findings for each category will be reported during the conference presentation.

In this research paper, discussions of strengths, weaknesses, limitations, and future trends for training and performance technology are presented as percentage of interviewee comments. The learning alternatives section describes percentage of interviewee organizations that encourage or offer that alternative to employees. Finally, priority of training topics and training drivers are presented in ascending order of topics or drivers identified by interviewees.

Discussion

Strengths, Weaknesses, Limitations, and Future Trends for Training Key leaders discussed the following issues relative to training. Percentages represent percent of times a particular factor was identified and discussed by the leaders. Because the interview responses were not structured or limited by checklists, the percentages represent importance but do not mean that leaders who did not mention that factor do not necessarily think it unimportant. Merely, that the factors that were discussed are leading in importance for their organization.

Organizational Leaders stated that training is critical to the organization (47%), especially essential to organizational change (20%). Training enables organizations to be globally competitive (7%), to implement improved technology (7%), and enhance intellectual assets (3%). However, results of training are viewed as mixed (3%), due to difficulty demonstrating return-on-investment (3%). Organizations can use training as a hiring and staffing advantage (3%), especially with *Generation X employees.*

Individual For individual employees, training is viewed as essential for positive attitudes (43%) towards continuous improvement and change. UAW workers have funds set aside through employee payroll contribution matched by company moneys, they expect training opportunities and believe training is necessary for job security (11%) and to be a competitive labor force (7%). Individuals need to learn the core skills of the business (7%) in order to reach their career potential (7%) and maintain employability skill levels (4%). Training will be particularly important for older workers (7%), but is expected by *Generation X employees* (4%).

Limitations Leaders reported that learnings often do not transfer well to the worksite (18%). This may be because training is often designed for the "lowest common denominator" (11%), which means that it covers the most fundamental concepts and is not adjusted to the skill level of the actual attending training participants. Training is also limited by lack of management support (18%), need for a variety of delivery methods (14%), and lack of noticeable return-on-investment (14%).

Future Trends Leaders predict that there will be a need for a wide variety of training (24%) that is focused on core attributes of the business (29%). Learning is likely to be viewed as lifelong and a normal part of work (12%), training will be more decentralized, such as on-line knowledge bases (18%). Training is expected to be necessary for continuous improvement (9%).

Strengths, Weaknesses, Limitations, and Future Trends for Performance Technology Leaders were less confident and consistent about the role and future of performance technology (PT).

Organizational Many leaders described performance technology as being essential (39%); there must be an integrated approach (17%) for positive return-on-investment to occur (13%). Performance technology approaches need to be linked to the organization's strategic plan and defined core competencies (9%). On the other hand, leaders caution that performance technology is likely to be misunderstood and that since PT approaches are complex, they are not readily implemented and used (9%).

Individual Discussion regarding performance technology's value to employees contained much variation. Leaders believe that PT approaches are worthwhile for the individual (16%) and provide greater opportunities for career growth and personal change (16%). They believe learning is easier (12%) because PT-oriented learning interventions are more relevant (8%), integrated (4%), and practical (4%). Using PT techniques results in successful interventions (4%), and employees are more likely to develop and maintain employability skills (4%), especially technology-oriented skills (4%). If politics do not interfere (4%), the impact could be "phenomenal" (4%).

Limitations According to the leaders, performance technology's complexity is a substantial limitation (44%), because it is costly and results are often difficult to quantify (8%). In addition, there is a minimal performance technology knowledge base and few theoretical models and examples of successful implementation and best practice (24 %). Due to these limitations, PT needs analyses are difficult to complete and subject to human error (8%). There is political pressure in some organizations to improve learning effectiveness (4%) and, as a result, possibly to abolish training departments (4%).

Future Trends It is expected that performance technology will be a growing trend (26%), due to increasing organizational understanding of PT concepts and techniques (17%), more effective practitioners (13%), and better PT tools (9%) and metrics (13%). It is expected that funding for performance technology will increase (4%) and may be outsourced (4%). For some organizations, the possibility of increased emphasis on performance technology is great (4%) but for other organizations there is currently no future for PT (4%).

Organizational vs. Individual Responsibility for Training and Performance Improvement The leaders viewed training and performance improvement as valuable for both the organization and the employee (See Table 2.)

Organizational Leaders described training as essential for an organization's viability (26%) by developing job skills and core competencies (52%). Organizations need to provide the necessary resources (9%). While not bound by the previous concept of "social contract", many leaders believe employee development is the "right thing" to do for employees (4%). In fact, skill development is expected by *Generation* X *employees* (4%) and often mandated by Government requirements (4%).

Individual Although leaders believe organizations are responsible for providing learning opportunities, they believe strongly that employees are personally responsible for acquiring their own skills and knowledge (75%). Individuals are also responsible for their own career management (20%) and their own development plans (5%).

Table 2. Organizational and Individual Employee Responsibility

Organizational Responsibility	n	%	Individual Responsibility	n	%
Job Skills/ Core Competencies	12	52%	Skill Development	15	75%
Organization's Viability	6	26%	Career Management	4	20%
Provide Resources	2	9%	Developmental Plans	1	5%
"Social Contract"	1	4%			
Government Mandated	1	4%			
Generation X	1	4%			

Use of Learning Alternatives and to What Degree? Organizations use or encourage a variety of learning techniques in addition to training. Thus employees can acquire new skills and knowledge on an individual and/or as-needed basis and increase their learning opportunities. Skill development (See Table 3.) is supported by on-the-job training in 80% of the organizations, which allows for immediate assistance. Job-aids (70%), self-study (60%), individual readings

(60%), coaching and mentoring (60%) can empower employees to learn quickly just what is needed or wanted. In addition, the organizations often support developmental job assignments (55%) and permit employees to volunteer for growth projects or activities (45%). Career planning in a systematic manner enables employees to establish reasonable job targets and confidently develop skills (45%).

Table 3. Learning Alternatives

Learning Alternatives	%
OJT	80%
Job Aids	70%
Individual Readings	60%
Coach/Mentor	60%
Self-Study	60%
Job Assignments	55%
Career Planning	50%
Volunteering	45%

n=20

Training Priorities and Large Training Interventions Training and performance technology leaders described large training efforts and prioritized training topics, to establish context and provide examples for class projects. Large training efforts cited covered primarily manufacturing operation, leadership and supervision issues: failure mode effect analysis (FMEA), QS 9000 (quality registration), product launch, lean manufacturing (continuous improvement of manufacturing production systems), leadership, management / supervision, brand management, and ethics. Interviewees were asked to rank their ten highest priority training topics. In all, 43 topics were identified. The twelve highest priority training topics, which closely aligned with large training efforts, were (1) teambuilding, (2) job specific / technical training, (3) leadership, (4) project / program management, (5) quality, (6) management / supervision, (7) problem solving, (8) computer software programs, (9) lean manufacturing / *Kaizen*, (10) interpersonal skills, (11) business and finance, and (12) change management. Leaders described primary training drivers as (1) strategic organizational priorities, including company mandates, (2) competition, and (3) needs assessment. In summary, operational concerns and "soft or people skills" are key issues for training solutions.

Recommendations and Implications

This research project has been helpful in clarifying the S. E. Michigan local expectations for graduates of the University of Michigan - Dearborn, School of Education, Adult Instruction and Performance Technology masters program. In addition, it surfaced a need for examples of best practice in performance technology. Although performance technology models exist (Dean & Ripley, 1997), key leaders are not able to implement the existing PT models at the present time.

In general, the findings of this study indicate that training is viewed as essential, especially if targeted, job-related, and linked closely to strategic business objectives. Training is limited by the difficulty of individualizing for specific needs and skill levels and the difficulty of transferring learning to the job. Performance technology is currently considered complex, costly, and difficult to implement due to lack of experienced practitioners, adequate models, and examples of best practice. However, performance technology is likely to increase in importance in the future as these limitations are resolved, primarily because PT better integrates performance issues with organizational needs.

Training vs. Performance Technology Currently there is greater emphases on training in the S. E. Michigan area than performance technology, although most organizations encourage learning alternatives. It will continue to be important for AIPT graduates to be highly competent in the design, development, delivery, and evaluation of training or adult instruction, and also highly capable of designing, developing, and implementing learning alternatives. As a result, the masters curriculum has added two required courses in distance learning and multimedia development.

Although performance technology is expected to increase in importance, for the present it is viewed as complex and costly, and has minimal support in most S. E. Michigan organizations. Due to the lack of PT models and examples of best practice, performance technology interventions are difficult to implement and measure results. Students will need solid preparation in performance technology, especially facilitation and other consulting skills. This research project identified a need for PT examples, which could be helpful follow-up research.

Metrics and Business Alignment Throughout the interviews, key leaders stressed the importance of aligning any intervention (training or performance technology) with business issues and core competencies. It is also critical for practitioners to be able to provide meaningful business metrics regarding interventions. As a result, a School of Management course in finance and economics will be required for the AIPT masters program.

Job Specific vs. People-Oriented (Soft) Skills Based on the priority of training topics, it appears that there is a balance in organizational training needs. As a result, it is critical that all students are competent in design, development, and delivery of both technical and people-oriented training and performance technology interventions.

Organizational and Individual Responsibility Although some organizations in the S. E. Michigan area are moving to downsize or eliminate training, organizations associated with the automotive vehicle industry are not. This may be due to QS 9000 quality standards that require developmental plans and training. Although organizations may view training as beneficial and necessary, they are also encouraging learning alternatives, such as job aids and job assignments, as developmental learning opportunities. It is very clear that leaders believe that the responsibility for actual learning rests with the individual, not the organization. Understanding of this clear distinction will be helpful for AIPT students in internships or as practitioners in the S. E. Michigan area. It will help clarify business reasons for encouraging training and performance improvement and help define trainer / performance technologist roles and responsibilities.

References

Apking, T. (1997, July 31). Interview of key training and performance technology leader in S. E. Michigan, funded by University of Michigan - Dearborn grant to faculty. Farmington Hills, MI: Triad Performance Technologies, Inc.

Bylinsky, G. (September 9, 1996). Training workers better, faster, and cheaper, Fortune..

Dean, P.J. & Ripley, D. E. (1997). Performance Improvement Pathfinders: Models for Organizational Learning. Washington, DC: International Society for Performance Improvement.

Dick, W. (1997, September 18). Instructional Design and Performance Technology: New Models, But What About Practice?, speech to Michigan Chapter of the International Society for Performance Improvement (ISPI). Troy, MI.

Fitz-Enz, J. (1990). Human Value Management: The Value-Adding Human Resource Management Strategy for the 1990's. San Francisco: Jossey-Bass.

Galagan, P. (1995, May). Reinventing the Profession, Training & Development. Alexandria, VA: American Society for Training and Development.

Harman, W. & Porter, M. (1997). The New Business of Business: Sharing Responsibility for a Positive Global Future. San Francisco: Berrett-Koehler Publishers, Inc.

Lapides, J. (1997). Study of Job Descriptions and Job Requirements Published in Detroit News / Free Press Sunday Classified Advertisements during 1996. Dearborn, MI: University of Michigan-Dearborn.

Lapides, J. (1997, October 19). Opening Remarks to Advisory Committee, Adult Instruction and Performance Technology masters degree program. Dearborn, MI: University of Michigan - Dearborn.

McCoy, T.J. (1996). Creating an "Open Book" Organization...Where Employees Think & Act Like Business Partners. New York: AMACOM.

McLagan, P.A. (1997, May). Competencies: The Next Generation, Training and Development. Alexandria, VA: American Society for Training and Development.

Pizzimenti, J. (1997, August 8). Interview of key performance technology leader in S.E. Michigan, funded research by University of Michigan - Dearborn grant to faculty. Dearborn, MI: MSXI Corporation.

Rhinesmith, S. (1995, May). Open the Door to a Global Mindset, Training & Development. Alexandria, VA: American Society for Training and Development.

Rothwell, W.J. (1996). ASTD Models for Human Performance Improvement: Roles, Competencies, and Outputs. Alexandria, VA: American Society for Training and Development.

Rothwell, W.J. (1996). Beyond Training and Development: State-of-the-Art Strategies for Enhancing Human Performance. New York: AMACOM.

Senge, P.M. (1990). Fifth Discipline: The Art and Practice of The Learning Organization. NY: Doubleday.

Spencer, L.M. (1986). Calculating Human Resource Costs and Benefits: Cutting Costs and Improving Productivity. New York: John Wiley & Sons.

Trawick, A (1996, August 30) Personal interview. Dearborn, MI: Ford Fairlane Human Resources Development Center.

University of Michigan - Dearborn. (1996). Graduate Announcement 1996-1998. Dearborn, MI.

Van Tiem, D. & Doyle, T.R. (1998). Design for People : DFP - Improving the Workplace, Paper Number 981006. Warrendale, PA: Society of Automotive Engineers (SAE).

Watkins, K.E. & Marsick, V.J. (1993). Sculpting the Learning Organization: Lessons on the Art and Science of Systematic Change. San Francisco: Jossey-Bass.

Outsourcing Training: Implications for Internal Human Resource Functions

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AchieveGlobal

In the last few years, outsourcing has become an increasingly popular way for organizations to cut costs and maximize efficiency. Business literature is filled with examples of companies that outsource a variety of functions. This paper is a report of a study of the trends in and reasons for human resources outsourcing at a selection of large ($100 million+ in sales) United States companies.

The term "outsourcing" is one with many connotations. For some it connotes downsizing and layoffs; for others efficiency and market prowess; for still others expertise and business savvy. While most people use outsourcing and contracting interchangeably, for the purposes of this paper, outsourcing is defined as a long-term relationship between a company and an external organization or contractor while contracting is defined as more of a project-by-project relationship. We'll leave other connotations up to the reader.

The past few years have seen an increase in the awareness and use of outsourcing in all fields, not just human resources (HR). Business literature is filled with articles concerning all types of outsourcing, such as information systems (Arnott, N. 1995; Horwitt, E. 1996), finance (Morrall, K. 1996.), and more recently, human resources (DeRose, G. J., McLaughlin, J. 1995; Kaeter, M. 1995; Outsourcing human resource functions 1996). Some may think that outsourcing training and development functions would necessarily lead to decreased expenditures, yet, in fact, training and development expenditures have increased by some 20% over the last year (Industry report, 1996) to approximately $60 billion per year. This includes training in a broad range of subject areas from computer skills to management skills. These numbers lead us to conclude that training remains a crucial need for most organizations.

This paper reports on a study on outsourcing and contracting of the HR function within organizations. The purpose of the study was to determine the following:

- the prevalence of outsourcing and contracting HRD functions;
- the reasons for outsourcing or contracting out training;
- the decision making practices;
  and
- the implications for internal HRD functions.

Research Questions

Some of the research questions we attempted to answer were the following:

- What types of training do large companies provide for their employees?
- When are organizations most likely to consider outsourcing their training function?
- When do organizations consider contracting for training services?
- What kinds of training / HRD activities are most likely to be outsourced in organizations?
- What are the implications for the internal HRD functions?
- How can internal HRD functions contribute to the organization's bottom-line by maximizing their effectiveness?

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Methodology

We conducted telephone interviews of top Human Resource executives in 92 companies within the United States. The sample consisted of selected industries: 21% of the respondents were from Chemicals/ Plastics/ Metals/ Industrial; 14% from Petrochemical and Oil Companies; 11% from banks; 9% from Health Services and Pharmaceuticals; 7% from Insurance; 7% from Technology (Hardware and Software); 7% from Investments; and the remaining 15% from a variety of other industry sectors. The sample included companies with at least $100 million in sales. Since the sample size was small, the results should be viewed as more qualitative than quantitative in nature. Despite the small sample size, the companies included in the survey represent a large proportion of the training dollars spent by United States companies.

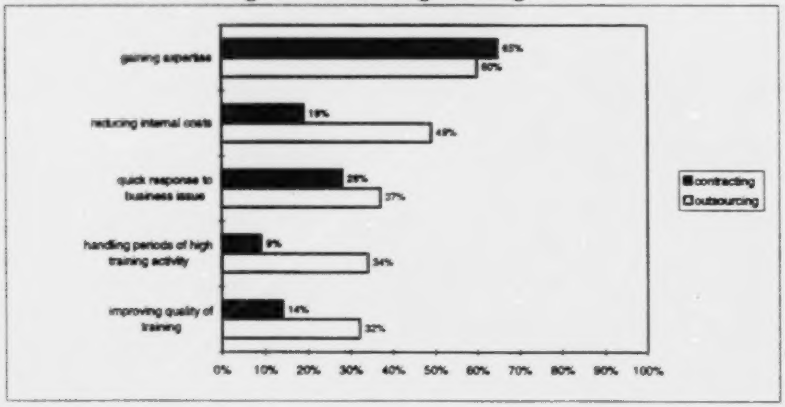
Results

The results of the study indicated that:

- Nearly all, 99%, of the companies surveyed have provided training in the past three years. Of those companies, 72% have a training department or a fully dedicated training manager.
- Approximately 40% of the organizations sampled have considered outsourcing training departments or programs.
- Of those who have outsourced training, most have had positive experiences, and indicated that outsourcing offers flexibility in providing the appropriate training plus cost and productivity advantages.
- Certain types of training are more likely to be provided in-house than others. Training considered specific to a particular company, such as organization policy and protocols, new product information, business planning, and employee/labor relations training is typically done in-house.
- The types of training that are more likely to be contracted out or outsourced are: executive consulting, executive development, and remedial education.

Reasons for Outsourcing and Contracting The major reasons given for outsourcing some of the training department's functions were to gain a particular expertise in a subject area (60%), reduce internal staff costs (49%), and to provide a quick response to a business need (37%). When contracting out for training, companies are much less likely to expect a cost savings -- what they do expect from a contractor is expertise (65%) and the ability to provide a quick response to a business need (28%). Figure 1 provides a quick comparison of the top reasons for outsourcing and contracting.

Figure 1
Reasons for Outsourcing and Contracting Training



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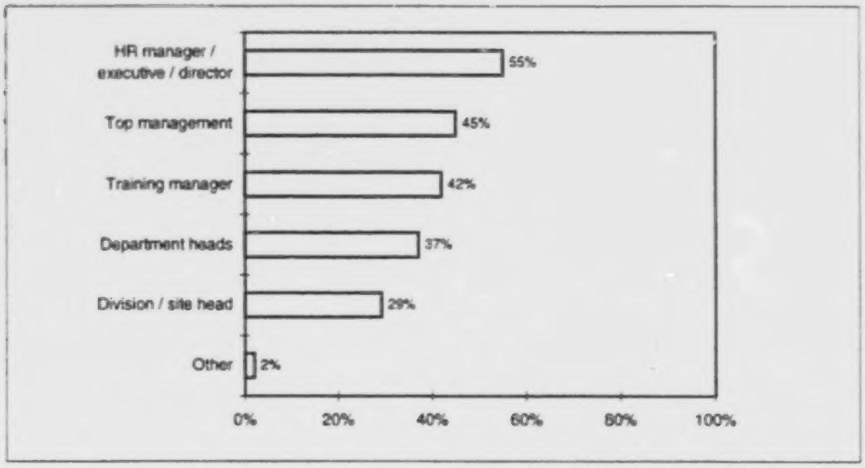
The Decision Making Process The companies we surveyed took similar steps to decide on an outside contract. What follows is a summary of the decision-making process.

- Training needs are identified at various levels.
    - » Resources are examined to see if training needs can be met internally.
- Companies develop a list of outside consultants based on previous experience with the company, recommendations, and references.
- Consultants are interviewed and asked to submit proposals.
    - » Consultants are sometimes asked to conduct a sample training or company representatives may sit in on training being provided at another site.
- The final decision is based on a variety of factors:
    - » how well the consultant meets the company's training needs;
    - » the perceived value (more important than cost) of the training;
    - » industry expertise;
    - » track record; and
    - » the consultant's ability to grasp the company's corporate culture.

Figure 2 shows those involved in the decision making process.

Figure 2
Responsible for Making Training Decisions

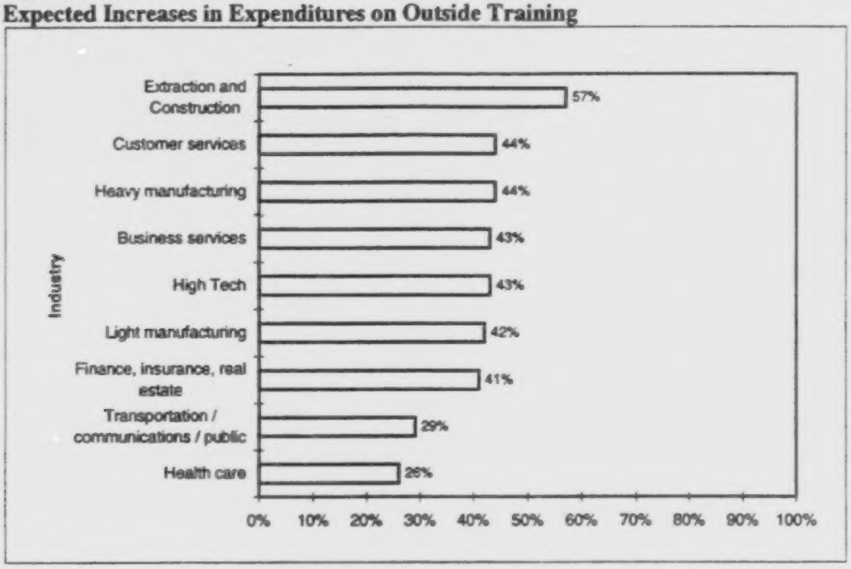


Similar Studies

Despite the small sample size of this study, our findings mirror the trends and opinions reported in much of the business literature on outsourcing and in the recent Human performance practices report published by the American Society for Training and Development (ASTD). A national survey of senior level HR professionals (Harkins, Brown, Sullivan, 1995) reports similar reasons for choosing to outsource rather than to develop expertise internally. Of the 120 respondents in the Harkins, et al. study (1995), 16% outsource over one million dollars of their training and development budget each year.

The ASTD Study (1997) shows that every industry surveyed expects to increase outside training expenditures this year. Figure 3 shows expected increases in expenditures.

Figure 3
Expected Increases in Expenditures on Outside Training



Data from ASTD, Human practices performances report, 1997

Implications for Internal HRD Functions

The implications for internal HRD functions are important. Internal HRD departments can become more engaged in the company's strategic planning by constantly assessing their own capacities, strengths, and weaknesses and by actively seeking the most effective solution to business issues whether it be outsourcing, in-sourcing, or not-sourcing. HRD departments need to optimize their own functions, rather than attempting to be all things to all people. In this way they can increase their effectiveness.

Some respondents to our survey commented that outsourcing provides them with more control over program design and strategy. Because outside contractors are chosen for their expertise, their programs seem more targeted and streamlined to many of the respondents. To address this perception of design and program control, internal HRD functions can start to think more like outsourcers: through assessment, they can become as targeted and as cost-effective as external organizations. The benefit of such an approach is that HRD functions can concentrate on the activities and training areas that they can provide well. More effort can be targeted at developing efficient and effective partnerships with internal clients and external consultants. An effective partnership can result in increased respect for the internal HR function.

Our survey indicates that HRD functions can contribute more effectively to the organizations' bottom-line by proactively examining the areas within the organization that need assistance and providing the expertise needed through a combination of outsourcing and internal expertise. HR Departments are more likely than other internal departments to have the necessary skills to identify appropriate consultants and to define and manage the projects.

Conclusion

Most of the respondents to the survey who had outsourced some of their training functions were satisfied with the results. For internal HR staff it can sometimes be frustrating to watch as an outsider gets respect for doing or saying the same things they themselves have been doing and saying. Sometimes, however, an outside voice is just what is needed to get a company to take a necessary step. Internal departments can leverage their own expertise in training, development, and personnel issues to take initiative to address company-wide outsourcing needs.

Flexibility and creativity are highly prized skills in today's business environment. HR Departments could benefit from leading their companies into productive and efficient relationships with outside consultants thus creating new turf for themselves rather than obfuscating and defending a gradually shrinking turf.

References

Arnott, N. (March 1995). Getting with the program. Performance, 38-42.
DeRose, G. J., McLaughlin, J. (October 1995). Outsourcing through' partnerships. Training & Development, 51-55.
Harkins, P. J., Brown, S. M., & Sullivan, R. (December 1995). Shining new light on a growing trend. HRMagazine, 75-79
Horwitt, E. (April 8, 1996). Knowledge, knowledge, who's got the knowledge. Computerworld, 80-84.
Industry report 1996. (October 1996). Training, pp. 37-39.
Kaeter, M. (November 1995) An outsourcing. . Training & Development, 20-25.
Morrall, K. (August 1996). Brining training in-house without the in-house costs. Bank Marketing, 43-47.
Outsourcing human resource functions. (July 1996). Supervision, p. 3.

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RESEARCH FORUM: Emerging Research and Issues

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The Research Forum was created in response to growing demand for a place in the AHRD conference program where researchers' work that does not fit the traditional symposium format could be presented, shared and discussed. This session will highlight researchers whose work addresses emerging issues, interesting idea, or pilot research. While still reviewed and held to high quality standards, these proposals were judged differently than those published in the proceedings. The session will be held in "cracker barrel" format where each researcher will lead a discussion group based on the topic of his or her work and participants will interact with the researcher. Every thirty minutes the audience will rotate to a new group, thereby attending three groups. Hopefully these discussions will generate papers for future conferences, research partnerships, and new thinking about emerging topics.

Issues in The Professionalization of HRD: Building a Knowledge Base and Credentialing Practitioners

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A number of issues indicative of an emerging field have become evident as the education of adults in the workplace becomes a major strategic thrust in many organizations.

Sustainable competitive advantage has proven elusive for companies in the 1990s. While making enormous investments in technology, research, and state-of-the-art marketing, many of today_s companies continue to ignore the single most important factor in achieving and maintaining competitive success: people. Companies with a highly committed workforce repeatedly out distance their rivals in both profits and returns.

People and their learning are becoming more important because many other sources of competitive success are less powerful than they once were. Recognizing that the basis of competitive advantage has changed is essential to developing a different frame of reference for management and for corporate strategy. Traditional sources of success--product and process technology, protected or regulated markets, access to financial resources, and economies of scale--can still provide competitive leverage, but to a lesser degree now than in the past, leaving organizational culture and capabilities, derived from people and workplace learning, as comparatively more vital.

If competitive success is achieved through people, then the skills of those people are critical. Consequently, one of the most obvious implications of the changing basis of competitive success is the growing importance of having a workforce with adequate skills. Between 1929 and 1982, education prior to work accounted for 26% of the growth in the productive capacity of the United States, with learning on the job contributing to an additional 55% (Carnevale & Goldstein, 1990). Carnevale and Goldstein go on to say that "learning in school and learning on the job are by far the most important factors behind American economic growth and productivity in this century, and will determine the nation's economic prospects in the next "(p. 30).

The influence of overseas competition, new technology, and the changing nature of American employees has made the effective training and retraining of American workers more critical than ever before. The scope of this effort is staggering. Employers spend over $50 billion per year on formal employee training and education. Approximately $180 billion per year is spent on informal, on-the-job training. One in eight worker receive formal employer-sponsored job training each year. This represents an estimated 1.6 billion hours of training for 49 million people (Carnevale & Schultz,1990; Training Industry Report, 1997). In-house human resource development (HRD) departments offer more instruction per employee than such alternative sources as external vendors, educational institutions, labor unions, or trade and professional associations. Without question, the workplace seems to be the catalyst that is changing the nature of adult education (The Future of Workplace Learning and Performance, 1994).

The importance of all this activity cannot be overestimated. A literate, educated, inquisitive, problem-solving workforce is essential to the survival and competitiveness of business and industry. A labor force that has "learned how to learn" and continues doing so can give a company a powerful edge. Organizations are discovering and using knowledge of adult learning to upgrade the capacity of their employees to make new contributions to the success of the company.

Throughout our lives learning experiences are an important source of personal stimulation. Workplace learning represents a positive hope, both for persons first entering the world of work and for individuals changing their work environments. Employees must learn to anticipate rapid change in their jobs, careers, work groups, and organizations. Farsightedness is learned. Human resource development can contribute to this learning by basing organized

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training, education, and development on expected future needs when appropriate to do so. Before workplace learning can help propel organizations into the next century, those engaged in aiding the process must refine and define the nature of their work.

That process of refining and defining the field is what this symposium will attempt to do as it explores some of the issues associated with aiding adults to learn in the workplace. Looking across all the issues, some generalizations about the state of the art of workplace learning can be made. Those generalizations are: 1). that the field is trying to forge an identity for itself; 2). what type of knowledge, empirically based or practice based, should inform the field, and 3). practitioners of workplace learning are concerned with professionalization of the field.

Development of the Field Devoted to Learning in the Workplace

Its not easy to define a field of study. It seems that, generally, those in the field of adult education claim HRD as part of adult education; while those in HRD, generally, attempt to distance themselves from adult education, human resource management (HRM), organizational psychology, and other fields that would lay claim to HRD's purview. Other elements such as the development of a knowledge base and professionalization, go into framing the field's boundaries. The development of a knowledge base and professionalization in particular, are being examined today for their role in establishing a field devoted to educating adults in the workplace.

With regard to the knowledge base there seems to be a wide range of opinion as to what type of knowledge should inform the field. Many see HRD as a function populated by practitioners (Rothwell & Sredl, 1992; Goldstein, 1993) and feel that knowing comes from doing. Still others (Campbell, 1989; Latham, 1994) believe that if the profession is ever to be recognized as a legitimate field of inquiry, the knowledge base must be empirically formed.

Those that feel that knowledge comes from practice believe that if one wants to know the best way to do something, one should ask a person who does it. A reflective practitioner is problem-solving oriented and develops "theories in use" (Schon, 1983). Those in their "ivory towers" don't really know what goes on "down in the trenches." The only way to ensure a field has a solid foundation is to anchor it with a practitioner's ways of knowing.

The advocates of a more empirically-based field believe that knowledge is formed from research. Without a reliable theory and research base, a function can never become a valid field of study and will forever remain a collection of "old wives tales" and speculation. Using all forms of research, both qualitative and quantitative, ensures that a field of study will have a solid foundation. There seems to be little middle ground between the two camps.

There also appears to be little middle ground on another issue related to educating adults in the workplace, licensing or credentialing. There is a contingency that would strongly support requiring that all engaged in workplace learning must first be certified by a board impaneled for that purpose or otherwise credentialed (Carlson, 1977; Cervero, 1987; White, 1992). There is an equally strong voice that contends that since the ranks of those engaged in educating adults in the workplace are primarily made up of practitioners and that the field is still relatively immature, no effort should be made to license or credential those involved (Friedson, 1986; James, 1992).

Those who support the call for some sort of certification of HRD people do so out of the belief that it leads to being perceived as "professionals," and that society expects professionalism from all practitioners. They contend that in a society where physicians, lawyers, and even plumbers must be certified to practice their trades, educators of adults in the workplace can not attain the same level of recognition from society until a systematic procedure is in place to ensure a certain level of competence. They also see professional certification as a mechanism for providing standards by which those in HRD can address questions such as who they are, what they are, and what level of proficiency one must attain in order to aid in workplace learning.

On the other hand, the job of educating adults in the workplace is so diverse and changing, it could be difficult to develop and implement standards of certification. Gilley and Galbraith (1987) have identified three components of professionalization as (1) level of knowledge and competence enhancement, (2) level of importance of occupation to society, and

(3) level of control by members of the occupation. Anyone familiar with workplace learning can readily see that the field is nowhere near being a profession based on these criteria. In addition, the issue of accessibility or exclusion must be addressed. If only certified professionals were permitted to engage in educating adults in the workplace, then it is possible, for example, that a supervisor who wanted to conduct a safety training class for a group of co-workers would not be permitted to do so just as a law clerk is not allowed to represent a client in a court of law. Such a situation would place workplace learning in the hands of professionals--alone. That could mean that "non-professionals" would be barred from sharing their expertise with co-workers, even on an informal or incidental level.

Future Issues

Where does HRD go from here? What is on the horizon? No one can know for sure what the future holds. Some things we do know are already beginning to emerge. Diversity training is gaining a lot of attention lately. As the nature of the workforce in the United States continues to change, those charged with aiding learning in the workplace are being asked to accomplish what society has struggled with for many years. Will we have any more success than society has as a whole? We know that even with a degree of success it will not be the last hurdle to cross before the field is defined--we are already beginning to talk about globalization of the workplace.

How will the development and education of workers fit into a global economy? As other cultures establish business concerns in the United States, will they adapt to our concept of workplace learning, or will we adapt to theirs--or are they the same thing? How will the introduction of other values change our perception of the value of learning? Or, as U.S. companies spread out globally, will we carry our ideals to other cultures, and perhaps, some might say, pollute them? Just what effect will the mingling and merging of multiple cultures have on those who facilitate workplace learning?

Finally, what may become one of the most critical issues to face educators of adults in the workplace is one of social consciousness. Authors such as Kincheloe (1995) and Korten (1996) contend that workplace learning should include an explicit focus on the social and ethical issues of work. They call for the education and training of "smart workers" who are skilled in communication, problem-solving, acquiring and using information, and developing the capacity to be life-long learners, but not devoid of intellectual subject matter, especially knowledge that addresses the past traditions and contemporary movements of workers rights. Kincheloe calls for problem-centered training that addresses various themes including, "the environment, the quest for justice, the fragility of democracy, poverty, and economic development, the quest for peace, problems of technology, transportation, hunger and nutrition, urban decay, and violence" (p. 286). They feel that these issues of democracy and the corporation's place in it have been quickly forgotten in the scramble to compete globally.

Will this be the new challenge for educators of adults in the workplace? Just as the workplace has been called upon to correct the deficiencies of the public education system in literacy and numeracy education, will it be called upon to correct deficiencies in social consciousness? How will corporate stakeholders respond? Even if this concept catches hold in the U.S., how will it play out in global workplaces--would non-democratic host countries even allow the introduction of such ideas to a local workforce? Are the current educators of adults in the workplace equipped for this type of an undertaking? It will be interesting to watch the answers to these questions unfold.

REFERENCES

Campbell, J. (1989). The agenda for theory and research. In I. Goldstein (Ed.). Training and Development in Organizations. San Francisco: Jossey-Bass Publishers.

Carlson, R. (1977). Professionalization of adult education: An historical-philosophical analysis. Adult Education,, 28(1), 53-63.

Carnevale, A. & Goldstein, H. (1990). "Schooling and training for work in America: An overview." In L. Ferman, M. Hoyman, J. Cutcher-Gershenfeld, and E. Savoie (Eds.). New developments in worker training :A legacy for the 1990s. Madison, WI: Industrial Relations Research Association.

Carnevale, A. & Schultz, E. (1990). Return on investment: Accounting for training. Training and Development Journal, 45(7), S1-S32.

Cervero, R. (1987). Professionalization as an issue for continuing education. In R. Brockett (ed.),Continuing Education in the Year 2000. New Directions for Adult and Continuing Education, no. 36. San Francisco: Jossey-Bass.

Friedson, E. (1986). Professional powers. Chicago: University of Chicago Press.

Gilley, J. & Galbraith, M. (1987). Professionalization and professional certification: A relationship. In Proceedings of the 28th Annual Adult Education Research Conference. Laramie, WY: University of Wyoming.

Goldstein, I. (1993). Training in organizations: Needs assessment, development, and evaluation (3rd ed.). Belmont, CA: Brooks/Cole Publishing.

James, W. (1992). Professional certification is not needed in adult and continuing education. In M. Galbraith, B. Sisco (eds.) Confronting controversies in challenging times: A call for action. New Directions for Adult and Continuing Education, no. 54. San Francisco: Jossey-Bass, 1992.

Latham, G. (1994). Human resource training and development. Annual Review of Psychology, 45, 545-582.

1997 Industry Report. (1997). Training, 34(10), 33-83.

Rothwell, W. & Sredl, H. (1992). The ASTD reference guide to professional human resource development roles and competencies (2nd ed.). Amherst, MA: HRD Press.

Schon, D. (1983). The reflective practitioner. New York: Basic Books.

The Future of Workplace Learning and Performance. (1994) Training and Development Journal, 48(5), 529-531.

White, B. (1992). "Professional certification is a needed option for adult and continuing education." In M. Galbraith and B. Sisco (Eds.). Conforting controversies in challenging times: A call for action, No. 54, San Francisco: Jossey-Bass.

Professionalization Comes From Theory and Research: The "Why" Instead of the "How-To"

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This paper presents the argument that without reliable theory development and research, HRD can never become a viable discipline with a solid knowledge base. We can learn from practice, but we will not grow and be recognized without research guiding the evolution of the field.

Like most other new professions, the first trainers did not see themselves as pioneers in a new field, but as professionals in other fields who had a job to help adults learn a specific skill (Nadler, 1990). HRD was not even seen as a significant activity until World War II. (Although the oldest training association, the Training Officers Conference, was started by Federal government training officers in 1938.) During this time, the armed forces and the industrial establishment were desperate for competent personnel. It was discovered that vast numbers of the adult population were capable of being trained and made productive in relatively short periods of time. Since that time, the overwhelmingly major focus of the field has been to provide services through the development and delivery of training programs.

The basis for developing these programs has been a mixture of guesswork, trial-and-error, and the borrowing of theory and research results from other disciplines. And, I believe the trial-and-error approach was usually chosen over a study of theory and research. The only theory we tried to adhere to was Knowles' adult learning theory. It is a relatively recent phenomenon that we have been examining what is considered best practice in the field; and this approach still begs the question of whether what may work in one context will work equally well in another context. This is not to say that there are no practitioners who have tried to develop programs and interventions based on theoretical constructs and/or solid research findings. But, as a percentage of the total practitioner pool, I would believe they are an infinitesimal number.

Is HRD, like adult education, a theoretical or practical field of knowledge. I do not think that there is any question that, up until recently, it has been a practical and applied discipline. "Its (adult education's, like HRD's) primary objective is coping effectively with some unsatisfactory state of affairs or problem of everyday life" (Jensen, 1964, p.106). Jacobs (Spring, 1990) echoed this theme when he stated that;

> . . . HRD is both an area of professional practice and an emerging interdisciplinary body of academic knowledge. The interrelatedness of these two aspects makes HRD similar to most other applied professions, most of which have emerged to meet some important social or organizational need. After the practice is established, the need arises to formalize the knowledge gained in practice into some logical structure. Such activity helps legitimize the profession and increases the reliability of practice (p.66).

This structuring began in 1967 with the publication of an article by Nadler and Lippitt; and in 1976 (Bureau of Training) with the first national research study devoted to identifying the roles and competencies of HRD specialists (from one sector; the Federal Government). The structuring ended with the most recent role and competency study conducted by the American Society for Training & Development (ASTD) (McLagen, 1989).

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HRD's current body of knowledge

Every new occupation seeking professional status has sought to delineate its foundation in terms of its unique body of knowledge. (Jarvis, 1987). HRD, again like adult education, has developed a unique body of knowledge suited to its purposes though two methods;

- Experiences gained from coping with problems of practice lead to the formulation of principles or generalizations which provides guides for future practice.
- Knowledge which has been developed by other disciplines is borrowed and reformulated for use in the field (Jensen, 1964).

The current body of knowledge is still represented by the ASTD study mentioned earlier. The results of this study represent both practice and borrowed theory and knowledge, which is sometimes hard to distinguish because of the mingling of the two over the years. It is important to note that the data collection technique used to arrive at the results was to poll approximately 300 "experts" (as identified by a committee of practitioners and academics) as to what they perceived to be the critical roles and competencies for the HRD field in five years (from the time of the study). This may be a legitimate form of inquiry for a field in its infancy, but it does not translate into a full-fledged body of knowledge for a professional discipline. There have been little, if any, research to test the experts' perceptions; few attempts to develop theoretical constructs from the data; and almost no scholarly critique and debate of the value of the study beyond its immediate applications (except for the Academic Guide to the Models for HRD Practice).

Is this role and competency model really enough to provide a foundation, or core, for the discipline to build from as it matures as a profession? If the core is the area where the discipline's own theory and practice will emerge, it should contain:

Philosophy and mission The essence of why this field exists as a profession; its purpose, values, and ethics that provide the foundation for the professional practice of the field. The notions of helping adults learn in work settings and optimizing human and organizational growth are philosophically-laden terms that represent a value towards the development of human potential.

As part of a strategic planning effort, ASTD (October, 1989) developed statements on their mission and values:

Our mission-we provide leadership to individuals, organizations, and society to achieve work-related competence, performance, and fulfillment through workplace learning.

Our values-we value the dignity, and the potential of the individual in the workplace. We celebrate diversity among people and value difference as a source of creativity. We believe that developing people's potential is critical to organizational effectiveness but that people themselves are ultimately responsible for their own growth and change. We believe that organizations, including our own, must provide individuals with the opportunity to develop. We believe that collaboration is essential for the actualization of our beliefs.

While this is a significant step in helping the field become aware of the need for a philosophical base, it was actually developed as part of an internal association strategic planning process, not as a statement for the profession.

McKenzie (in Stuckey and Berardinelli, 1990) suggests that the philosophical orientations of adult educators are rooted in professional practice and derive more from concrete experiences in organizational settings than from logical analysis of the evaluation of abstract philosophical arguments. He also found that business and industry trainers had more progressive and behaviorist orientations than other educators of adults. But Stucky and Berardinelli could not find one "cohesively written philosophical statement" in the literature (p.1). Mech (1984) noted in one of her dissertation findings that we need to have a philosophy because it gives form to function and provides the foundation for theoretical model building.

Theory & concepts The intellectual underpinnings of the profession. If the philosophy represents the "heart" of the field, the theory represents the "brain". This is the *basic* knowledge needed to function as professionals. Jacobs (Spring, 1990) cites education, systems theory, economics, psychology, and organizational behavior as the five major disciplines that have most influenced the field, although he admits his list is by no means exhaustive. Other disciplines such as sociology, anthropology, and management science have been mentioned as contributing to the theory base

(Chalofsky & Lincoln, 1983). While there seems to be general agreement that we work from an interdisciplinary body of theory, there is no agreement as to what part should be considered as essential for HRD professionals. The two knowledge areas that were considered core knowledges in the Models for HRD Practice (McLagan, 1989) were adult learning and organization behavior. I believe we have reached a significant milestone with the research and theory building being conducted on the learning organization and on group & organizational learning. This work represents the first research and theory emerging directly from our own discipline. But, whether the theory is generated from within the field or borrowed from other disciplines, we need to continue to build the theoretical foundation for the field.

Roles & competencies The heart and brain need the "body" in order to implement the ideas they generate. The profession needs a core set of skills and abilities in order to put the theories and concepts into practice. The most recent study, Models for HRD Practice, actually identified fewer roles than the previous study, Models for Excellence (McLagan, 1983), even though the scope of the study was broadened. And those 11 roles could be further organized into the four roles (learning specialist, manager, consultant, and career development specialist) that have been in the literature since 1975 (Chalofsky, 1989). We also know which competencies could be considered core to the field by identifying those that are the most often required for performance of the roles. We have compiled enough research data to provide for the day-to-day practice of the field at present.

But abstract sets of performance are not enough to guide *professional* practice. Consider Lewin's well-known formula: behavior is a function of the interaction between performance and the environment (Watkins & Willis, 1991). We may know what needs to be performed, but we know little of the social context (the organizational environment) where the performance will operate nor the psychological context (the individual inner environment) of the learner. We need to develop the theory and conduct the research that will translate the results of this study into truly professional practice.

Why HRD's present "body of knowledge" has failed to professionalize the field

We know what roles we should perform and we are continually scanning the field for best practice, but we have yet to reach the level of a mature profession for the following reasons:

What we practice is based on guesswork, not on theories tested by research Most of what is practiced in the field is still, at best, educated trial and error, and, at least, "the fad of the month". Few organizations or HRD consulting firms conduct research to test new approaches. And the academic research being conducted is still too new to stand the test of being translated into practice.

What we practice is based at least ten years (at least) behind the state of the art, in terms of both research and thinking The state of new emerging research and theory building is approximately five years ahead of the state of the profession; what is considered best practice in the field. The state of the profession is approximately five years ahead of the state of practice; what usually goes on in organizations on a day-to-day basis. This is true of most professions; physicians prescribe treatments they are used to until a new one is brought to their attention by various professional sources. And they read their journals and go to conferences to keep up with the latest research. They are aware that each level pushes the one below it and it is their professionally ethical responsibility to be aware of what is going on at each level to give their patients the best service possible.

In HRD, the state of research and theory building did not have outlets for dissemination until several years ago with the establishment of the *Human Resource Development Quarterly* and the *Performance Improvement Quarterly* journals. In addition, an association for HRD academics (the HRD Professors Network of ASTD) was established in 1981 but did not seriously begin to promote scholarly work until the Academy for Human Resource Development was formed in 1993. Thus, HRD has not had the state of research and theory building guiding and informing best practice; which ,in turn, would be guiding and informing day-to-day practice. Instead, we have had people's opinions and ideas cloaked as new theories and/or approaches driving practice.

What we practice is based on what the client wants, rather than on what works As a helping profession, we are unique. We are not guided by a professional set of standards, we are not expected to adhere to an enforceable code of conduct, and we are not committed to a philosophically-based professional mission or set of professional values. We are a context and situation-based field. Some would say this is beneficial, because it allows us to be flexible to deliver the services needed by our clients. I would argue that it leaves us open to deliver the services and interventions our clients *want*, but not necessarily need. We may know what the client needs and what interventions will work, but what ultimately gets delivered is what "sells". This may sound cynical until you read the conference brochures that represent the current state of practice and that are attended by HRD specialists who then go back to their organizations with the latest "how-to's" that just happen to coincide with the latest books top management is reading. And then a year later read in Fortune or The Wall Street Journal about the failure of the latest management approach to lead to organizational effectiveness.

The only way we will be able to transition from this stage is to be able to present interventions to our clients that have been developed from theory and research. We also, of cause, need to convince our clients there are no "magic" answers to organizational effectiveness.

There is nothing more practical than a good theory

While the field needs to generate and/or adapt theory, as well as conduct more research, we also need to heed Lewin's words in ensuring that theory and research gets translated into practice. Yet theory building and research is a relatively new and somewhat maligned activity outside of the HRD academic setting (Chalofsky & Reinhart, 1988). Practitioners do not have the time or incentive to read research-based articles, organizational HRD functions do not consider many of their data-gathering and inquiry-based studies as research, and many organizations will not share their research for proprietary reasons. In addition, practitioners do not have any incentive to publish research and academics do have incentive to publish, but only in scholarly journals that are only read by other academics. Actually, the state of HRD research is at a point now where adult education research was approximately 15 years ago when Kidd (1981) listed a number of other criticisms in a discussion of adult education research needs. He stated that too often research arises out of the needs and interests of the researcher rather than the needs of the field; we pay little attention to research from other countries; we look at problems in settings that are not easily generalizable; and our writing about research " is as stylized as an airline timetable, and only half as exciting" (p. 57).

The research being conducted needs to inform practice, the research findings needs to get into the hands of the practitioners, and the practitioners need to be willing to apply the research findings in and with their client organizations. Merriam (1986) makes several suggestions to facilitate the research-to-practice transition. One is to find people who act as links between researchers and practitioners; in our field they could be the consultants and practitioners who are also graduate students. They need to read and conduct research for their studies and can help to translate and apply research findings. The Academy for HRD has instituted a special group of consisting of practitioners who are interested in research and has invited them to give feedback to the Academy on research needs and to support the dissemination of research. Another suggestion is more collaborative arrangements between researchers and practitioners. It has long been the practice of consultants and their clients to make joint presentations at conferences, the same could be encouraged for researchers and their clients.
Especially where the relationship to practice is built into the research design, such as action research, case study research, and other forms of qualitative research. Making research results easily understood would help the transition. ASTD's Training & Development has a section that is included quarterly called "research capsules" and the Academy of Management's Executive has a section called "research translations". Both summarize research studies and gear the writing for practitioners.

Conclusion

There are now over 200 academic programs in HRD and related fields. The research emanating from these programs have begun to have an impact on the field. In addition, the number of graduates in managerial and consulting positions must also be growing, given the number of graduates from all these programs. This will, in turn, result in HRD professionals who appreciate research. Our professional credibility will begin to be based on a theoretically sound body of knowledge that will give us the ability to give our clients what they truly need. Professional credibility based on theoretically-based practice will give us the ability to be valued and trusted as *authentic* agents of organization change and effectiveness.

References

Bureau of Training. (1976) An outline of learning experiences for the employee development specialist. Washington, DC: US Civil Service Commission.

Chalofsky, N. (1989) "What is HRD?" In Gradous, D. (ed.), Systems theory applied to human resource development. Alexandria, VA: American Society for Training and Development.

Chalofsky, N. and Lincoln, C. (1983) Up the HRD ladder. Reading, MA: Addison-Wesley.

Chalofsky, N. and Reinhart, C. (1988) Effective human resource development. San Francisco: Jossey-Bass.

Jacobs, R. (1990) "Human resource development as an interdisciplinary body of knowledge". Human Resource Development Quarterly 1(1), 65-71.

Jarvis, P. (ed.). (1987) Twentieth century thinkers in adult education. London: Croom Helm,.

Jensen, G. (1964) "How adult education borrows and reformulates knowledge of other disciplines". In Jensen, G., Liveright, A., & Hallenback, W. (eds.) Adult education: Outlines of an emerging field of university study, Washington, DC: Adult Education Association, 105-112.

Kidd, J. R. (1981) "Educational research needs in adult education". Convergence: An international journal of adult education. 14:2, 53-62.

Lippitt. G. & Nadler, L. (1967) "Emerging roles of the training director". Training and Development Journal, 21(8), 2-10.

Mech, VA (1984) "Human resource development in the United States from 1630 to 1980". Dissertation Abstracts International vol.45/09-A.

Merriam, S. (1986) "The research-to-practice dilemma". Lifelong learning: An omnibus of practice and research. 10(1), 4-6 & 24.

McLagan, P. (1989) Models for HRD practice. Alexandria, VA: ASTD Press.

McLagan, P. (1983) Models for excellence. Alexandria, VA: ASTD Press.

Nadler, L. (1990) Developing human resources. (3rd ed.). San Francisco: Jossey-Bass.

Stuckey, S., and Berardinelli, P. (1990) The search for a philosophy of training and development, presentation, The 46th National Conference of the American Society for Training and Development, May 6-10, Orlando, FL.

Watkins, K. and Willis, V. (1991) "Theoretical foundations for the models of HRD practice: A critique". in Dixon, N., and Henkelman, J. AcademicGuide to the Models for HRD Practice. 0=Alexandria, VA: American Society for Training and Development.

Professionalization and Reflective Theory Building in HRD

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Human resource development professionals agree that a sound knowledge base is a critical aspect of any developing field of practice. The source of that knowledge and the means of knowledge production, however, are frequently points of contention. Reflective theory building is one way that practitioners can contribute to the professionalization and knowledge base of HRD.

One of the five critical questions debated in a recent issue of *New Directions for Adult and Continuing Education,* (Rowden, 1996) focuses on the role of theory in human resource development (HRD), specifically the source of knowledge in a field striving to professionalize. Chalofsky (1996) argues that "professionalization comes from theory" (p.51), and further stresses that "without a solid theory and research base the discipline will never become a valid field of study" (p.51). Mott, on the other hand, does not question the need of a solid theoretical base, but maintains that "expert knowledge must be generated by those ... who have a vested interest in the process and product. Those persons are reflective practitioners rightly engaged in reflective theory building" (1996, p.62). The purposes herein are to further explore the role and source of knowledge in the continued professionalization of HRD through a review of Chalofsky and Mott's work, and to examine reflective theory building in professional practice. The paper concludes with suggestions for facilitating knowledge production by reflective practitioners, thereby promoting the professional growth of HRD.

Professionalization and the Role of Knowledge in HRD

While the development of a distinct knowledge base is one criteria for the recognition of a profession, the issue of professionalization is a complex concern, especially in a field that is home to both practitioners and scholars. In the above mentioned text regarding theory and the professionalization of HRD, Chalofsky and Mott's (1996) contributions deal with the issue of the source and means of knowledge production in the profession. Theirs is not, however, a polar argument.

Chalofsky: Professionalization Depends on Theory. Chalofsky (1996) begins his chapter with a bit of history regarding the formation of HRD as a practical and applied field. In particular, he cites the lack of distinct theoretical constructs to guide the practices of the profession. He identifies HRD's unique body of knowledge as a (a) combination of informal but expert knowledge held by those practicing in the field and (b) knowledge from other disciplines which is borrowed and reformulated as needed by HRD practitioners. Chalofsky argues that this is appropriate and sufficient for an interdisciplinary and developing "field in its infancy, but it does not translate into a full-fledged body of knowledge for a professional discipline" (p.52). He adds that two "legitimate" studies have been conducted into the roles and competencies needed in HRD, but suggests that these alone fail to provide a core for the profession as it matures.

This core, Chalofsky (1996) maintains, should consist of three elements: philosophy and mission; theories and concepts; and roles and competencies. First, the field's philosophy and mission, should provide the foundation, rationale, and ethics for practice in the profession. In this brief paragraph, no mention is made regarding whether the field of HRD has considered any particular philosophical stance or formulated a mission statement. Indeed, later in the chapter, Chalofsky states that the "field is not ... committed to a philosophically based professional mission or set of professional values" (p.54). Second, theoretical constructs should guide those practicing in the field. In HRD, numerous disciplines contribute to the theories and concepts borrowed for

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use in the field: anthropology, economics, education, management and organization science, psychology, and sociology. Third, roles and competencies would outline the skills needed to practice in the field. Chalofsky briefly introduces the American Society for Training and Development (ASTD) studies conducted by McLagan (1983, 1989), and another by Dixon and Henkelman (1991) which organized the roles and competencies needed in the field. Chalofsky cautions his readers that while "enough research data has (sic) been complied to provide for day-to-day practice at present … abstract sets of competencies are not enough to guide professional practice" (p.53).

Chalofsky (1996) next addresses the reasons that the field of HRD has failed to professionalize. Without consideration of the distinct and complex elements of professionalization offered elsewhere (See for example, Cervero, 1991, or Gilley and Galbraith, 1987), Chalofsky maintains that HRD has failed in professionalization efforts because (1) practice is based largely on guesswork rather than theory, (2) lags five to ten years behind available research, and (3) focuses on the whims of "what the clients want but do not necessarily need" (p.54). Unfortunately, based on Chalofsky's statements that "what is practiced in the field is still, at best, educated trial and error and is often the fad of the month," that the "field is not guided by a professional set of standards," and that "what ultimately get delivered is what sells" (p.54), readers are perhaps justifiably left to conclude that the professional failing of the field is one of ethics and not research.

In his final argument concerning the value and practicality of "good" theory, Chalofsky (1996) offers several reasons why theory and research are resisted in HRD, all the while maintaining the need for rigorous and relevant research which can be applied in practice. He cites practitioners' lack of time and incentive to publish or even read research, poor understanding and conceptualization of social science inquiry as research, and organizational reluctance to disseminate information. Many of these arguments and suggestions for their mediation are those outlined by Mott (1996) with her assertions that useable knowledge for the practice of HRD comes from reflective practice.

Mott: Knowledge Comes From Practice. Mott opens her chapter with an acknowledgment of the wide disparity between researchers and practitioners, but argues that "theories are not abstractions generated in a practical vacuum … [but] are, or should be, born of inquiry and challenges in practice" (1996, p.57). She then maintains that an important concern to HRD professionals should be the establishment of more positive relationship between research and practice, and the encouragement of "less of a distinction between the act of research and the person at the heart of the inquiry" (p.58).

Mott suggests that at the heart of the existing tenuous relationship between research and practice are "our beliefs about the nature and value of science itself, the purpose of research, and even who researchers should be" (1996, p.58). She explains that our view of science is based on the centuries-old positivist paradigm in which knowledge is thought to be an external commodity, a paradigm in which most of us are not taught to be creators of knowledge used in practice, but merely consumers. She further argues that issues of research legitimacy and the rights to knowledge production are really issues of power and control. Citing researchers in various disciplines, Mott submits that most practitioner/scholars have previously been faced with discouragement regarding the pursuit or application of research, or remained part of the problem with their reinforcement of the status quo where knowledge production is concerned. Factors such as changing professional environments, increased demands for accountability, and the shortened "shelf life" of the field's knowledge base, however, are heralding a shift in paradigms. Mott suggests that HRD professionals are now likely to be both researchers and practitioners, and proposes a model of inquiry which she terms reflective theory building.

According to Mott, reflective theory building is based primarily on Schön's concept of reflective practice. Mott reviews earlier work by Argyris and Schön (1974) and Schön (1983, 1988), in particular, Schön's concepts of "*reflection-on-action*, undertaken after the fact, and *reflection-in-action*, spontaneously occurring in the midst of action itself" (Mott,1996, p.60). She then explains what she considers the combination of the two, *reflection-for-action*. When inquiry occurs in this state of *reflection-for-action*, Mott contends that *reflective theory building* begins through

> the thoughtful integration of formal theory, reflection, and practical knowledge and expertise. This, then, is the process of *reflective theory building* in which the reflective practitioner consciously reflects on the challenges of practice, reiteratively engages in problem posing, data gathering, action, evaluation, and reflection, and then shares the knowledge produced with others in practice. (p.60-61)

In her concluding discussion, Mott (1996) reiterates the nature of the problems faced by those who pursue research within practice, speaks to the value of education in applied research methods, and identifies ways in which professionals, as well as students in HRD can be encouraged in reflective theory building. In light of the concerns both she and Chalofsky raise, Mott contends that "resolution lies partly in the continued acceptance of alternative research paradigms and a broadened philosophy of science that values reflective theory building as a complementary and equally constructive path to knowledge production" (p.62).

So, actually, there is little significant disagreement between the positions which Chalofsky and Mott hold. Chalofsky insists, rightly so, that a solid theoretical base will bring the field HRD a greater degree of professional credibility, and even states that "those in the field need to develop the theory and conduct the research that will translate … into truly professional practice" (1996, p.53). Both stress the need for a knowledge base which is both rigorous and relevant for the profession, a knowledge base which Mott suggests can best be developed through reflective theory building.

Reflective Theory Building in Professional Practice

Reflective theory building in practice is a natural extension of reflective practice as originally posited by Schön (1983, 1988), which of course, is based on an understanding of the term *reflection*. Foundation for the term's meaning can be found in Dewey's early thoughts on the meaning of experience and reflection which he defined as "active, persistent and careful consideration of any belief … and the further conclusions to which it tends" (1933, p.9). Dewey maintained that practitioners must "draw from the center of their own knowing and act as critics and creators of their world rather than solely respondents to it, or worse, victims of it" (1933, p.78). Drawing on one's own knowing meant being able to reflect, or, according to Dewey, to "look back over what has been done so as to extract the net meanings … for intelligent dealing with further experiences. It is the heart of intellectual organization and of the disciplined mind" (1938, p.87).

Following Dewey's thinking on experience and reflection, Schön suggested that reflective practice is a process of uncovering unexamined and problematic aspects of daily practice and making them the focus of critical and reflective inquiry. Schön maintained that the goal of reflective practice was the development and articulation of theories-in-use and the ultimate improvement of practice. Rather than falling on either side of the theory vs. practice dichotomy, reflective practice assumes that expertise is comprised of both formal and informal theory and research, tacit knowledge and practical intelligence, and reflection (Mott, 1994), all of which facilitate reflective theory building. Effective action through reflection and the generation of knowledge go hand in hand, with practitioners building an ever-increasing repertoire of professional knowledge which can then be disseminated to others in the profession.

While many scholar/practitioners have considered the nature, scope, and implications of reflective practice, a few provide useful illustrations of how reflective theory buildings occurs. In an early explanation of different modes of reflection, for instance, vanManen (1977) described three modes or levels of reflection which roughly correspond to Schön's concept of reflection-on-action. According to vanManen, the first mode or level of reflection is technical in function, focused on the effectiveness of actions within practice. Reflection at the next level is practical, in which the practitioner questions the contextual appropriateness of choices made. And, the third mode of reflection is described by vanManen as ethical or moral reflection, and deals with the values aspect of action in practice.

Brown and Elfenbein's (1991) work focuses on reflection among action scientists in management arenas. They maintain that our dependence on science has actually encouraged fields to professionalize, but suggest that theories derived from a scientific paradigm no longer apply in today's management climate. According to Brown and Elfenbein, managers are not only removed from the realities of daily decision making and frequently unable to be unable, but "fail to learn the principles of inquiry and knowledge generation as it relates to the process of management" (p.176). Their model stresses practitioners' ability to learn from practice in a contextual and reiterative way and then transfer that understanding into knowledge that is relevant for practice.

Ashbaugh and Kasten (1993), whose work deals most with school administration, concur regarding the need for pre-service preparation and continuing professional education in research methods as means of resolving the disparity between theory and practice. They cite many of the definitions and foundational research that are common to discussions of reflective practice, but add an important dimension which can be drawn upon in the preparation of reflective practitioners. Ashbaugh and Kasten suggest that reflective practitioners differ from others who are less mindful regarding their actions. The four distinctions are: a heightened self-awareness and a sensitivity to "discontinuities between their espoused theories and their theories-in-use"; their ability to "think otherwise ... to imagine different structures, assumptions" (p.162); their ability for critical analysis and reflection-in-action; and, their commitment to lifelong learning and ability to articulate their knowledge to others. Ashbaugh and Kasten maintain that preparation programs which help to promote these four distinctions will foster the development of leaders who are also reflective practitioners.

Like Dewey and Schön, the above scholars argue for a new epistemology of practice and professional preparation, one that assumes a "reflective posture, both grounded in theory and actively engaged in the generation of new knowledge in the context of practice" (Mott, 1996, p.60), one that would contribute to reflective theory building in HRD.

Educating for Reflective Theory Building

In addition to the strategies suggested by the above research, other strategies can be used, especially in HRD graduate programs to facilitate reflective theory building. And while these strategies focus on students, as Chalofsky points out (1996), many students are currently working in the field and opportunities exist to engage other professionals in collaborative research, continuing education programs, and other cooperative endeavors. In addition to the use of discussion groups, internships, and other apprenticeship opportunities, two additional strategies adhere to the scientist-practitioner model as prescribed by Barlow, Hayes, and Nelson (1984), wherein practitioners are encouraged to be discriminating consumers of others' research, rigorous evaluators of their own practice interventions, and researchers who disseminate their own research to their professional communities. The two strategies are forms of authentic assessments through the use of learning portfolios and research colloquia.

Although reflection is a challenging concept to teach, learning journals and portfolios promote reflective thinking in graduate courses as well as serving as useful research tools. Learning portfolios are any mechanism or artifact used to capture one's learning and promote the deliberate and conscious consideration of our thoughts and actions. Learning portfolios can be journals or can take many other forms: notebooks with article or chapter abstracts, newspaper, magazine, or journal clippings; photographs or other media; television or film reviews; original creative work; even bulletin boards, desk pads, or computer logs in which learners capture the focus and process of their reflection (Mott, 1997). Prompted by these writings, documents, or artifacts, the learner can then proceed with reflective inquiry involving "reflective problem setting ... conscious examination ... and the articulating and formalizing" (Mott, 1996, p.60) of one's informal but expert knowledge about a given circumstance or situation in professional practice.

Authentic assessment conducted within the framework of a student research colloquium is another method which encourages reflection. In one graduate adult education program, one in which many learners are professionals from the HRD field, a colloquium is held each spring semester in which the learners present organizational or classroom-based research or other aspects of their professional practice. The colloquium is preceded by dialogue and writing assignments in which the participants learn to be reflective about not only their learning in general, but also in regard to their chosen topics and the impact upon actual practice (Mott, 1997). Once again, the process of reflection is integrated with formal theory, combined with the participants' practical knowledge and professional expertise, and followed by renewed reflection, all of which are at the heart of reflective theory building in practice.

Conclusion

This paper focused on one of five issues deliberated in *Workplace Learning: Debating Five Critical Questions of Theory and Practice* (Rowden, 1996), that of the role of theory and the source of knowledge in a field striving to professionalize. In two chapters of that text, Chalofsky and Mott (1996) both stressed the need for a solid theoretical base for the field, and Mott outlined how a model of inquiry termed reflective theory building supported reflective practitioners with a vested interest in knowledge production for the field of HRD. In this paper, their chapters were reviewed, the process of reflective theory building was explored further, and suggestions for facilitating knowledge production by reflective practitioners were presented, promoting at least one aspect of further professionalization of the field of HRD.

References

Argyris, C., & Schön, D. A. (1974). *Theory in practice: Increasing professional effectiveness*. San Francisco: Jossey-Bass.

Ashbaugh, C. R., & Kasten, K. (1993). Educating the reflective school leader. *Journal of School Leadership, 3*, 152-164.

Barlow, D. H., Hayes, G.S., & Nelson, R. O. (1984). *The scientist-practitioner*. New York: Pergamon.

Brown, S. M., & Elfenbein, M. H. (1991, October). *Experiential learning: Reflection on practice and the organizational action scientist*. Paper presented at the 11th National Conference on Alternative and External Degree Programs for Adults, Mobile, AL.

Cervero, R. M. (1991). Changing relationship between theory and practice. In J. M. Peters, P. Jarvis, & Associates (Eds.), *Adult Education* (pp. 19-41). San Francisco: Jossey-Bass.

Chalofsky, N. E. (1996). Professionalization comes from theory and research: The *why* instead of the *how*. In R. W. Rowden (Ed.), *Workplace learning: Debating five critical questions of theory and practice*. New Directions for Adult and Continuing Education, No. 72 (pp.51-56). San Francisco: Jossey-Bass.

Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process*. Boston: D. C. Heath.

Dewey, J. (1938). *Experience and education*. New York: MacMillan.

Dixon, N., & Henkelman, J. (1991). *The academic guide: A volume in models for HRD practice*. Alexandria, VA: American Society for Training and Development.

Gilley, J., & Galbraith, M. (1987). Professionalization and professional certification: A relationship. In *Proceedings of the 28th Annual Adult Education Research Conference*. Laramie: University of Wyoming.

McLagan, P. (1983). *Models for excellence*. Alexandria, VA: American Society for Training and Development.

McLagan, P. (1989). *Models for HRD practice*. Alexandria, VA: American Society for Training and Development.

Mott, V. W. (1994). *A phenomenological inquiry into the role of intuition in reflective adult education practice*. Unpublished doctoral dissertation, Department of Adult Education, University of Georgia, Athens, GA.

Mott, V. W. (1996). Knowledge comes from practice: Reflective theory building in practice. In R. Rowden (Ed.), *Workplace learning: Debating five critical questions of theory and practice*. New Directions for Adult and Continuing Education, No. 72 (pp.57-63). San Francisco: Jossey-Bass.

Mott, V. W. (1997). *Research and practice colloquium: A model of authentic assessment in one adult education graduate program*. Manuscript submitted for publication.

Rowden, R. W. (1996). *Workplace learning: Debating five critical questions of theory and practice*. New Directions for Adult and Continuing Education, No. 72. San Francisco: Jossey-Bass.

Schön, D. A. (1983). *The reflective practitioner*. San Francisco: Jossey-Bass.

Schön, D. A. (1988). *Educating the reflective practitioner*. San Francisco: Jossey-Bass.

vanManen (1977). Linking ways of knowing with ways of being practical. *Curriculum Inquiry, 6*, 205-228.

Credentialing in the Workplace: Human Resource Development Practitioners Should Strive for Certification

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This paper provides a brief overview of certification terminology, examines the recent growth of certification programs, and explores emerging issues that may offer some compelling reasons for training and human resource development practitioners to pursue certification in the workplace.

We live in a litigious society that demands accountability, integrity, and competence. As consumers, we have come to expect that our physicians, nurses, dentists, dental hygienists, cosmetologists, attorneys, accountants, underwriters and financial planners are competent in their professional practice. Although Wiley (1992a) has acknowledged that the general public is not usually a direct consumer of the human resource manager's services, she has suggested that the public is often affected by policy decisions and recommendations made by human resource professionals. With the increasing complexities of the workplace, highly trained human resource professionals will be required as corporations recognize the strategic importance of their human resources. While licensure, certification and continuing professional education do not guarantee competence, they do establish acceptable standards of practice.

Over the past several years, a number of disciplines have examined professional certification. Specifically, within the past twenty-five years, the fields of purchasing, materials management and logistics have witnessed the continued development and refinement of a variety of professional certification programs (Wilkinson, 1992). The issue of certification has even been contemplated in the marketing field (Parmerlee, 1991). More recently, the computer industry has experienced a growth in certification programs as vendors such as Novell and Microsoft have established certification programs for their customers. In fact, since 1987, 60,000 individuals have passed the CNE (certified Novell engineer) test, and 50,000 have graduated as CNAs (certified Novell administrators) (Filipczak, 1995a). In addition to the certification offered to their customers, Microsoft, Novell and the Educational Testing Service (ETS) have recently attempted to establish a certified technical trainer (CTT) standard (Filipczak, 1995b).

The issue of certification of adult educators, trainers and human resource development (HRD) practitioners has been one that has been examined and debated within the field of adult education periodically over the years (Booth, 1984; Coscarelli, 1984; Galbraith & Gilley, 1985, 1987; Gilley, 1996; James, 1992; White, 1992). It has also been discussed in the context of professionalization (Cervero, 1992; Collins, 1992). The growth of vendor certification programs, professional association sponsored, and university sponsored certificate and certification programs in the last decade (Holt, 1991; Lopos, 1991; Wiley, 1995) coupled with dramatic changes occurring within the business environment offer compelling reasons that merit a re-examination of the issue of certification of human resource professionals. Consequently, this paper will review some terminology and literature on this topic, and examine some of the arguments in support of certification.

Credentialing Terminology

Although several terms associated with credentialing are often used interchangeably, researchers consider them to be distinct (Bratton & Hildebrand, 1980; Galbraith & Gilley, 1985). Professional certification is considered to be "a voluntary process by which a professional association or organization measures the competencies of individual practitioners" (Galbraith & Gilley, 1985, p. 12). Lee (1986), however, has defined certification more generally as the process of publicly attesting that a specified quality has been achieved or exceeded. Certification should also be distinguished from licensure and accreditation. Licensure is a mandatory legal requirement for

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certain professions which offers the public protection from incompetent practitioners. Licensure is similar to certification in that the recipient of either credential is an individual. Alternatively, accreditation is typically awarded to an institution, rather than an individual. Bratton and Hildebrand (1980, p. 22) define accreditation as "the process whereby an agency or association grants public recognition to a school, college, or university, or specialized study program that meets certain predetermined qualifications or standards."

There is also an important distinction between qualification and certification. Qualification refers to "the formal training process, developed using acceptable systematic methods that prepares individuals to assume duties in a specified occupation (Lapp, 1992, p. 5), whereas certification is "the formal (and sometimes informal) evaluation process that determines, validates and attests that individuals meet the technical competencies and skills that are prescribed for performing a specific occupation" (p. 6). Lapp contends that qualification is often the precursor to certification. A final distinction should be made between certificate and certification programs. Holt (1991) acknowledges that the completion of a certificate program means the acquisition of certain proficiencies in concentrated areas of study. Settle (1991) suggests that a certificate is a document with a diploma-like format that is given to participants at the conclusion of a training experience to acknowledge their attendance. Certification programs, in contrast, tend to denote the measurement of competencies. However, a certificate-like document is typically provided to acknowledge certification and the completion of a certification program.

The Growth of Certificate and Certification Programs

Certificate and certification programs are not new inventions (Lopos, 1991). Their growth has been influenced by expansion in areas of employment, by legislation continuously seeking to upgrade professional credentials, by advances in technology, and by the shift toward a global economy. A brief review of some of the recent literature on certificate and certification programs in the human resources field is presented.

Certification in the Human Resource Management Field. Unlike the field of adult education, of which human resource development is considered a subfield by many, the human resource management field has four professional associations which provide certification. These are the Human Resource Certification Institute (HRCI), the American Compensation Association (ACA), the International Foundation of Employee Benefit Plans (IFEBP) and the Board of Certified Safety Professionals (BCSP) (Wiley, 1992a, 1995). The two certification designations awardedby the HRCI are the Professional in Human Resources (PHR) and the Senior Professional in Human Resources (SPHR), and represent the only ones available for the human resource management field in general. The other associations award designations that represent specialized areas of human resources. Since its original inception as the American Society for Personnel Administration Accreditation Institute (AAI) in 1975, the renamed HRCI has certified more than 14,000 HR professionals, and the number of candidates has increased from 150 in 1976 to 595 in 1986 to 2,052 in 1990 to nearly 4,000 in 1993 (Cherrington & Leonard, 1993; Wiley , 1992b). The increasing number of persons sitting for the exams clearly demonstrates a strong interest in certification.

Certification in Training and Human Resource Development. Certification in human resource development and training and development (HRTD) has been pursued on two fronts (Smith, 1994). Professional associations constitute one front, and higher education the other front. Smith further subdivides certification in higher education into two categories: traditional and non-traditional paths. The traditional path includes formal degree programs at multiple levels ranging from the baccalaureate to the doctorate, while the non-traditional path includes continuing education units or proficiency certification which may or may not offer degree credit. Although professional associations have been in the forefront of the certification movement, they have been unsuccessful in their efforts to bring about professional certification. Conversely, higher education has been involved in certification efforts because traditional degree programs have been a major source of voluntary certification for years (Smith, 1994).

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Smith's (1994) survey of the 1991 and 1993 American Society for Training and Development (ASTD) Academic Directories identified twenty-four non-degree certificate programs that appeared to specifically focus on human resource/training and development (HRTD). Nineteen of the twenty-four programs were included in Smith's study, and of these, thirteen were identified as certificate programs, three as certification programs, and three were categorized as "other." The annual program enrollment for these programs ranged from five to two hundred participants, and the programs had been in existence from one year to nineteen years. Three of these programs had formal relationships with local ASTD and/or National Society for Performance and Instruction (NSPI) chapters, and many had informal relationships with these organizations. According to Smith, the motivation of program coordinators to offer such programs was to meet a need among practitioners with and without an HRTD background. The motivation among graduates of these programs to attend non-degree certificate programs included their desire to improve their credentials in order to compete more favorably in the job market. Many wanted to obtain work-related competence rather than another degree, and some considered the non-degree programs opportunities to build confidence for future graduate work.

Nondegree Certificate Programs in HRD. Gaudet and Kotrlik (1995) conducted a study which was designed to describe HRD certificate programs currently offered by educational institutions throughout the United States, and to determine the factors that are perceived by HRD certificate program administrators as influencing the development of such programs. Their findings suggest that sixteen primary factors serve as the foundation for the development of HRD certificate programs. The four factors perceived by program administrators as having the most effect on the development of these programs included: changed work environments, career development, certificate programs' clientele, and the quality of the training professional. These findings also suggest that nondegree HRD certificate programs can, and do, play a role in the academic preparation of HRD practitioners (Gaudet & Kotrlik, 1995).

Trends in the Workplace Potentially Influencing Certification

Several trends emerging in the workplace and in academia appear to have the potential to influence the certificate and certification program movement within the field of human resources. Human resources is the umbrella term that has been selected because certificate and certification programs in training and human resource development, and human resource management have been in existence for a number of years (Holt, 1991; Smith, 1994; Wiley, 1992a, 1992b, 1995). However, it should be noted that there is no formal, standardized certification process in the country (Lapides, 1991) associated with training and human resource development like the four previously mentioned professional associations within the human resource management discipline. A standard certification for HRD certificate programs is also nonexistent (Gaudet & Kotrlik, 1995).

The changing nature of the workplace, the proliferation of technology, and the demands of the global economy are forcing many organizations to become increasingly reliant upon knowledge creation and dissemination for sustained competitiveness. Because products and services can be easily replicated and reproduced, it has been argued that the rate at which individuals and organizations learn may become the only source of sustainable competitive advantage (Stata, 1989; Watkins & Marsick, 1993). This increased emphasis on learning at the individual, team and organizational level will impact the skills and competencies required of adult educators, trainers and human resource professionals, particularly in organizations that espouse a learning philosophy. The traditional roles of trainers and human resource management and development practitioners will evolve and new roles which call for a new set of skills and competencies will emerge (McLagan, 1996; Ulrich, Brockbank, Yeung & Lake, 1995; Watkins, 1995). How will human resource professionals prepare for such changes and challenges? Certificate and certification programs appear to offer promising solutions.

A Contingent Workforce. Many scholars have acknowledged that America has entered the age of the contingent or temporary worker, of the consultant and subcontractor, of the just-in-time work force -- fluid, flexible and disposable (Bridges, 1994; Morrow, 1993). The workers of the future will have to constantly sell their skills, and reinvent their relationships with employers. Although reports vary about the percentages of temporary workers, Bridges (1994) asserts that the figure is actually one hundred percent. He maintains that all jobs in today's economy are temporary, and that we have entered the age of a jobless society. For Bridges, jobs are a "social artifact" (p. 55) on the wane along with the conditions that initially created such work arrangements. The new work arrangements being created are temporary to meet the productivity needs of an organization. Thus, the work arrangement itself is contingent upon the need for what an individual may do, not his or her position. Job security, according to Bridges, resides in the person's employability, vendor-mindedness and resiliency. Handy's (1989) vision of the organization is similar. He acknowledges that less than half the workforce in the industrial world will be holding conventional full-time jobs in organizations by the beginning of the 21st century. He depicts the organizational structure as being similar to a shamrock, a three leafed clover. The first leaf represents the professional core of the organization which will increasingly be comprised of professionals, technicians and managers. These employees are the essential core of the organization. The next leaf is comprised of contractors, and the third leaf is represented by temporary and part-time workers. The concepts of shamrock organization and the jobless society present a clear image of the workplace of the future. Employability will become dependent upon a person's drive to update his or her credentials, acquire new skills and remain knowledgeable about changes occurring in his or her respective field. A commitment to lifelong learning will be the only way to remain competitive in this changing job market. A survey of HRD executives conducted by ASTD (Training & Development, 1994) suggests that self-directed careers will become the norm, and that employees will have to assume more responsibility for their behaviors and learning. It becomes apparent that these trends will impact many in the workforce, but human resource professionals in particular. Not only do many human resource professionals have the challenging task of upgrading the organization's workforce through training and development, they also have the formidable task of upgrading their own skills and abilities to avoid outsourcing.

Outsourcing. Investments in training and workplace education continue to increase which suggest that training is a growing enterprise (Carnevale & Carnevale, 1994). A survey of annual training expenditures by The Lakewood Research Group reported that $52.2 billion had been spent by large organizations for training in 1995 (Training, 1995). This figure represents an estimated 1.59 billion hours of training for 49.6 million people. Additionally, expenditures for outside sources of training increased by 4 percent between 1994 and 1995 to $10.3 billion, which represents 20 percent of total training expenditures. Further, twenty-five percent of organizations indicated that they are increasing their use of outsourcing as a business strategy.

Universal Performance Standards. ASTD's research (Training and Development, 1994) on business trends for learning professionals reveals that HRD executives' perceived universal performance standards will continue to increase. Such standards modeled on the Malcolm Baldridge National Quality Award criteria and ISO 9000 will increase in use and importance. According to Filipczak (1995a), corporate training departments can now be formally certified by an independent agency as meeting certain standards of quality. Organizations can also seek certification for the processes by which they train, and qualify their instructors. Given the endorsement of a set of criteria to be used for certifying the competence and professionalism of training departments by the International Board of Standards for Training, Performance and Instruction (IBSTPI), is it unrealistic to expect that future certification standards could be developed for professional trainers?

Diverse Backgrounds of HR Professionals. According to Kaeter (1995), many trainers and human resource professionals do not have formal education and experience in this field. They did not select HRD as their original occupation (McCullough, 1987), but transferred into the field as subject matter experts with preservice educational backgrounds in occupations outside HRD (Lapides, 1991). Although there has been a significant growth over the last decade in the number of universities that are awarding postgraduate degrees in subjects related to HRD (Kaeter, 1995), a 1993 Training study suggests that fifty-five percent of those trainers surveyed were working as trainers without a college degree (16%) or with a bachelor's degree (39%). Thirty-eight percent of those surveyed held masters degrees, and fewer than 7% have a Ph.D. degree. Nondegree certificate and certification programs in training and human resource development may offer a cost effective and timely alternative for those practitioners who may be unable or ineligible to pursue courses without a commitment to seek bachelors or masters degrees.

These trends suggest that human resource professionals, like other professional employees, are not immune from changes affecting their livelihood. The growth of nondegree certificate and certification programs in training and human resource development, and professional certification within the human resource management field may be indicative of the perceived need to remain competitive and competent. Certificate and Certification programs may also present a viable option for professional development.

The Arguments For Certification

The arguments against certification are as well documented as the arguments supporting certification (Booth, 1984; Coscarelli, 1984; Galbraith & Gilley, 1985; Gilley, 1987; Gilley & Galbraith, 1986; Gilley, 1996; James, 1992; White, 1992; Wiley, 1995). Opponents of certification contend that certification has several negative implications for the field of adult education and human resource development. They include: the diversity and extensiveness of the field render certification impractical and unattainable for the entire field (James, 1992); the lack of a common body of knowledge, and the difficulty of establishing competence criteria and measurement standards; the potential restriction of the labor supply; the financial and human costs, legal implications and regulatory processes associated with the administration of certification (Galbraith & Gilley, 1985). These issues are not trivial, nor should they be dismissed, however, they should not overshadow the positive implications associated with certification. These negative implications will be refuted, and the positive implications of certification will be discussed in the following section.

Refuting the Arguments Against Certification. The field of adult education and human resource development is fragmented, diverse and interdisciplinary. A common body of knowledge may not exist for the entire field, and therefore, a single, comprehensive certification program representing the interests of all adult educators and human resource developers may not be possible. However, certification may be plausible within certain specific areas of the field, such as training and human resource development.

Lack of a Common Body of Knowledge. ASTD provided a set of competency standards for the field in 1983 and in 1989, and continues to examine the evolving roles of human resource development practitioners. These efforts, while important first steps, are frustrated by lack of a common body of knowledge and by the broad scope of practices associated with the field (Watkins, 1995). Watkins (1990, p. 181) argues that "we need to standardize not our curriculum, but our vision for the field." Given the rapid changes occurring within the workplace, defining competencies for what practitioners are currently doing in the field as opposed to what they might be or ought to be doing may rigidify HRD practice rather than advance it. According to Watkins (1990, p. 181), "It is more important to agree on a common set of values that might characterize ethical practice, on a common understanding of what represents an optimal career ladder for the field, and on the role of HRD graduate programs in professionalizing the field than to standardize it." Certificate and certification programs have the potential to influence the development and professionalization of the field by promoting an integrated vision for the field which embraces a common set of values that characterizes ethical practice. Once a vision is established, a common body of knowledge may emerge. Existing certificate and certification programs may offer a perspective of what professionals in the field perceive to be critical to effective practice given the changes occurring within the workplace.

Restricting the Labor Supply. One of the functions that certification can serve in real-world labor markets is that of restricting the labor supply, or gatekeeping for the field, which is an activity that is perceived to limit the entry of qualified professionals (Galbraith & Gilley, 1986). Gatekeeping may appear to be elitist as it has the potential to cartelize a field by preventing marginal workers from identifying with a particular occupation. However, Hochberger (1993, p. 32) asks "Isn't there *something* we can do to expose the charlatans in our business? "Isn't there some way to drive these people out of the corporate-training field and to restore some professionalism?" Embracing certification may be one of the answers. It may not expose every charlatan in our field, but it may serve as a differentiating factor in selection decisions.

Administrative and Regulatory Issues. There are numerous administrative and regulatory issues that exist which must be addressed by a credentialing agency offering certification. However, to avoid pursuing the establishment of a certification agency on the basis of these issues would be unfortunate as there are agency models in other professions that could serve as a benchmark. Within the field of training and human resource development, three associations offer workable models that could be used as a guide. They are: the Ontario Society for Training and Development in Canada, the Society for Human Resource Management, and the International Board of Standards for Training, Performance and Instruction (Smith, 1994).

Why Certify? The Positive Implications of Certification. The benefits of certification are examined from three perspectives: the individual seeking certification, the organization, and the field, discipline or profession promoting certification (Wiley, 1995).

The Individual. The benefits include the mastery of a body of knowledge; personal and professional recognition of the attainment of a certification designation; the potential for career advancement and pay incentives; a timely and cost effective approach to professional development; an opportunity to develop a network of professionals with whom ideas, experiences and best practices can be shared, and an avenue to pursue lifelong learning for personal and professional development. In a workplace that will be increasingly reliant upon an individual's development through self directed learning endeavors, certificate and certification programs may become a critical external resource to many practitioners.

The Organization. Certification provides a demonstrated commitment by the employee to personal and professional development. Certification may also assist in the selection process to increase the likelihood of staffing HR functions with qualified professionals. Although more empirical research is needed to assess performance among certified and non certified professionals, preliminary results of a research study found that payback time on certification expenses were typically less than nine months and productivity was higher among certified personnel within the information technology field (Merrill, 1995).

The Field, Discipline or Profession. Certification and the existence of a credentialing agency is one criteria which distinguishes a profession from an occupation (Gilley, 1996). Certification is often viewed as one of the ways in which a field or discipline can be advanced, and one of the ways in which a field can develop and maintain professional and competent practitioners. The development of a common body of knowledge, or an integrated vision for the field which serves as a framework for certification may also provide direction in the design of college and university curriculum. Certification can provide guidance to junior practitioners and can encourage senior practitioners to update their knowledge to remain competitive.

Conclusions

As this paper has illustrated, it appears that certification is alive and well in the human resource management field and its various specializations, and it is alive and well in training and human resource development despite the absence of a formal certification process. The formation and longevity of nondegree training and human resource development certificate and certification programs is indicative of the growing demand for such programs among HRD practitioners. This increasing demand, perhaps fueled by the changes in the workplace and within the HRD field, suggests it might be time for these associations, and university sponsored certificate and certification program administrators to join forces in a collaborative manner to address the issues associated with certification of training and human resource development practitioners for the advancement of the field.

References

Booth, B. (1984). Certification - Beyond reason. Performance & Instruction Journal, 23(1), 19.

Bratton, B., & Hildebrand, M. (1980). Plain talk about professional certification. Instructional Innovator, 25(9), 22-24.

Bridges, W. (1994). JobShift. Reading, MA: Addison-Wesley Publishing Company,

Carnevale, A. P., & Carnevale, E. S. (1994, May). Growth Patterns in Workplace Training. Training & Development, S22-S28.

Cervero, R. M. (1992). Adult and continuing education should strive for professionalization. In M. W. Galbraith and B. R. Sisco (eds.), Confronting Controversies in Challenging Times: A Call for Action. New Directions for Adult and Continuing Education, no. 54. San Francisco: Jossey-Bass.

Cherrington, D. J., & Leonard, B. (1993). HR pioneers' long road to certification. HRMagazine, 38(11), 63-75.

Collins, M. (1992). Adult and continuing education should resist further professionalization. In M. W. Galbraith and B. R. Sisco (eds.), Confronting Controversies in Challenging Times: A Call for Action. New Directions for Adult and Continuing Education, no. 54. San Francisco: Jossey-Bass.

Coscarelli, W. (1984). Arguments for certification. Performance & Instruction Journal, 23(1), 21.

Filipczak, B. (1995a). Certifiable! Training, 32(8), 38-42.

Filipczak, B. (1995b). The fever spreads. Training, 32(8), 40.

Galbraith, M. W., & Gilley, J. W. (1985). An examination of professional certification. Lifelong Learning: An Omnibus of Practice and Research, 9 (2), 12-15.

Galbraith, M. W., & Gilley, J. W. (1986). Professional certification: Implications for adult education and HRD. Columbus, Ohio: ERIC Clearninghouse on Adult, Career and Vocational Education.

Galbraith, M. W. (1987). Certification would advance professional practice. Lifelong Learning: An Omnibus of Practice and Research, 11 (2), 15-18.

Gaudet, C. H., & Kotrlik, J. W. (1995). Status of HRD certificate program Development. Human Resource Development Quarterly, 6 (1), 91-99.

Gilley, J. W. (1986). Defining a profession: Does HRD measure up? Personnel Administrator, 31 (1), 14-18.

Gilley, J. W., & Galbraith, M. W. (1986). Examining professional certification. Training and Development Journal, 40 (6), 60-61.

Gilley, J. W., & Galbraith, M. W. (1988). Commonalities and characteristics of professional certification: Implications for adult education. Lifelong Learning: An Omnibus of Practice and Research, 12 (1), 11-14.

Gilley, J. W. (1996). Human resource development practitioners should resist professional licensing. In R. W. Rowden (ed.), Workplace learning: Debating five critical questions of theory and practice. New Directions for Adult and Continuing Education, no. 72. San Francisco: Jossey-Bass.

Handy, C. (1990). The Age of Unreason. Boston, MA: Harvard Business School Press.

Hochberger, J. (1993, November). Ship of charlatans. Training, 32-35.

Holt, M. E. (1991). A rationale for certificate programs. In M. E. Holt and G. J. Lopos (eds.), Perspectives on Educational Certificate Programs. New Directions for Adult and Continuing Education, no. 52. San Francisco: Jossey-Bass.

James, W. B. (1992). Professional certification is not needed in adult and continuing education. In M. W. Galbraith and B. R. Sisco (eds.), Confronting Controversies in Challenging Times: A Call for Action. New Directions for Adult and Continuing Education, no. 54. San Francisco: Jossey-Bass.

Kaeter, M. (1995, November). HRD degrees: Who needs them? Training, 65-74.

Lapides, J. (1991). Continuing professional development. In N. M. Dixon and J. Hinkelman (eds.), The Academic Guide. Alexandria, VA: American Society for Training and Development.

Lapp, H. J. (1992). Important and meaningful distinctions between qualification and certification. Performance & Instruction, 31 (9), 3-8.

Lee, C. (1986). Certification for trainers: Thumbs up. Training, 23 (1), 56-64.

Lopos, G. J. (1991). Certificate programs: Alternative ways to career advancement and social mobility? In M. E. Holt and G. J. Lopos (eds.), Perspectives on Educational Certificate Programs. New Directions for Adult and Continuing Education, no. 52. San Francisco: Jossey-Bass.

McCullough, R. C. (1987). Professional development. In R. L. Craig (ed.), Training and Development Handbook (3rd ed.). New York: McGraw-Hill, 1987.

McLagan, P. (1996). Great ideas revisited." Training & Development, 50(1), 60-65.

Merrill, K. (1995). New training study bolsters arguments for vendor-authorized certification programs. Computer Reseller News (656), 62.

Morrow, L. (1993). The temping of America. Time, 40-41.

1995 Industry Report. (1995). Training, 32(10), 37-82.

Parmerlee, D. (1991). Certification through professional development. Marketing Research, 3(4), 63-65.

Settle, T. J. (1991). Certification programs for business and industry. In M. E. Holt and G. J. Lopos (eds.). Perspectives on Educational Certificate Programs. New Directions for Adult and Continuing Education, no. 52. San Francisco: Jossey-Bass.

Smith, T. R. (1994). Exploring the structure of human resource/training and development non-degree certificate programs at U.S. colleges and universities and the perceived needs of practitioners. Unpublished doctoral dissertation, Texas A & M University.

Stata, R. (1989). Organizational learning - The key to management innovation. Sloan Management Review, 30(3), 63-74.

Trends that will influence workplace learning and performance in the next five years. (1994). Training & Development, 48(5), S29-S32.

Ulrich, D., Brockbank, W., Yeung, A. K., & Lake, D. G. (1995). Human resource competencies: an empirical assessment. Human Resource Management, 34(4), 473-495.

Watkins, K. E. (1990). A Common Body of Knowledge Is Nonsense in a Field in Search of Itself. Human Resource Development Quarterly, 1(2), 181-185.

Watkins, K. E. (1995). Workplace learning: Changing times, changing practices. In W. F. Spikes (eds.), Workplace Learning. New Directions for Adult and Continuing Education, no. 68. San Francisco: Jossey-Bass.

Watkins, K. E., & Marsick, V. J. Sculpting the learning organization. San Francisco, CA: Jossey-Bass, 1993.

White, B. A. (1992). Professional certification is a needed option for adult and continuing education. In M. W. Galbraith and B. R. Sisco (eds.), Confronting Controversies in Challenging Times: A Call for Action. New Directions for Adult and Continuing Education, no. 54. San Francisco: Jossey-Bass.

Wiley, C. (1992a). The certified HR professional, HRMagazine, 37(8), 77-84.

Wiley, C. (1992b). The wave of the future: Certification in human resource management. Human Resource Management Review, 2(2), 157-170.

Wiley, C. (1995). Reexamining professional certification in human resource management. Human Resource Management, 34 (2), 269-289.

Wilkinson, E. S., Jr. (1992). An overview of certification programs in the purchasing and materials management field. International Journal of Purchasing, 28(1), 34-39.

Formation of Cross-Cultural Global Teams: Making Informed Choices on Team Composition

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Much is being written about the importance of teams, the advent of self-directed work teams and the importance of multicultural teams as companies become increasingly global. However, beyond an expressed recognition that global teams can have special properties because of their inherent diversity, there has been relatively little focus on how you form and nurture the effectiveness of such teams. How do you go about creating global teams in ways that allow you to capitalize on diversity?

As companies become more global it can be important that team composition reflect the diversity involved. There are several reasons for this and they can directly impact business success:

1. The company must understand the perspectives of the cultures in which they operate and how best to harmonize diverse interests. It is a case of cross-cultural awareness or sensitivity. It is also a way to build cross-cultural competence.
2. Wide differences of cultural perspective or orientation can be better dealt with when individuals from those cultures have an opportunity to work together.
3. Divergent views realized through blending of cultures within a team can spark creativity and build insight that might not materialize in a more homogeneous group.

Because diversity of team composition is functional to a global enterprise, it can be assigned a high priority in the way a company conducts its business.

> The cosmopolitan management team is becoming a familiar sight in global corporations. Whirlpool International's Management Committee is made up of six people from six nations. IBM prides itself on having five nationalities represented among its highest ranking officers and three among its outside directors. Four nationalities are represented on Unilever's board and three on the board of Shell Oil. (Rhinesmith, 1996, p. 158)

If engineered properly in relation to the task assigned to a global team, multicultural team content can produce an advantage.

> The potential productivity of a culturally diverse team is high--they have the additional breadth of resources, insight, perspectives and experiences that facilitate the creation of new and better ideas. Regrettably, culturally diverse groups rarely actualize their potential. (Adler, 1991, p. 141)

Adler's insight, including the failure of many culturally diverse teams to realize their potential, is at the very heart of what seems to constitute a major shortfall in the pursuit of effective global teams. While there are many contributing factors, including ethnocentrism (my way is right and you need to adapt to it), the basic problems seem to lie in inattention to the way you go about mixing diverse cultures and individuals in teams. National culture (now in wain as an influence as regionalism and diffusion of cultural characteristics becomes evident) must be complemented by other understandings. For example, is the culture monochronic (doing one thing at a time) or polychronic (simultaneous occurrence of many things and great involvement with people?) Germany, Switzerland and the United States are monochronic. Others such as

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France, Latin American and the Arab countries tend to be polychronic. (Hall & Hall, 1990, pp.14-16) Mixing the two types without proper cultural sensitivity can be like mixing oil and water. It can lead to the kind of failure Adler alludes to.

Other ways of diagramming cultural differences such as Hofstede's four dimensions (Power Distance, Individualism, Uncertainty Avoidance and Masculinity) isolate other cross cultural differences which relate to ability to deal with ambiguity, how power is viewed and distributed, a collectivistic versus an individual orientation and the degree to which focus is on task versus relationships. Hofstede refers to this as "collective programming of the mind" (Hofstede, 1984, p. 13). People from the United States tend to be quite different from the Chinese in terms of power distance, individualism and long-term orientation. China is much more inclined to autocratic forms of power and hierarchy, much more collectivistic, and is far and away more inclined to take a long view of things. In fact, based on Hofstede's research, China has the longest term orientation of any country in the world. Similarly, Fons Trompenaars has found glaring differences between cultures as well, using a research approach quite different from Hofstede. For example, in asking people around the world "what makes a good manager?", he found that 85 percent of the US sample would opt to be left alone to get the job done, where only 38 percent felt that way in Singapore. (Trompenaars, 1993, p. 143)

Beyond what can be attributed to cultural programming, there are differences between individuals that, while certainly influenced by culture, tend to behave independently (e.g., the propensity to be activistic versus reflective from the standpoint of learning style).

When these various criteria and continua are summed--cutting across all the existing research--it becomes obvious that before simply folding cultures together in a team, there needs to be some kind of scoping that occurs in determining the best mixing and matching of team content. It is not a search for likeness, but rather for a richness of diversity that can spark creativity (if it is a project team that is expected to invent new approaches) and be complementary. Whatever the blend of diversity within a team, there needs to be a conscious effort to help team members: 1) understand their own cultural biases; and, 2) understand the biases of the other cultures and people involved in the team.

The problem in the 1990's is at least two-fold when it comes to cross-cultural teams.

1. There is often no real sizing up of how the people or their cultures mesh. They are often simply thrown together in the belief that diversity must be honored or that it is a good thing to do.

2. There is insufficient effort to spotlight cultural differences as part of global team building, so that team members are psychologically conditioned to capitalize on differences.

As we become increasingly global in our thinking and orient on development of high performing teams, we now need to develop the necessary frameworks for capitalizing on diversity.

> While lower-performing teams were characterized by individuals who collectively could cover only a few of the roles required for effective teamwork, members of high performing teams had strong diversity of roles and complemented each other's differing strengths. (Hoecklin, 1995, p. 115)

Theoretical Framework

The theoretical framework draws from several resources. It is anchored by the two major data bases that exist in terms of multiculturalism from a business perspective. It is indeed remarkable that given the emphasis on globalism and global teams that only two such data bases exist. The first comes from Geert Hofstede and his work with IBM world wide, involving a focus on 50 countries and drawing on 117,000 responses to a 150 question questionnaire (Hoppe, 1990, pp. 7-10). From his research he was able to empirically derive four cultural dimensions.

1. Power Distance (degree of centralization of authority).

2. Uncertainty Avoidance (extent to which a society tends to consider itself threatened by uncertain and ambiguous events).

3. Individualism-Collectivism (some cultures view individualism positively; others view it with disapproval or even contempt).

4. Masculinity-Feminism (the degree of masculinity of a society's dominant values--such as assertiveness, acquisition of money and not caring for others).

To his four basic dimensions, Hofstede later added a fifth--long-term/short-term orientation (Hofstede, 1993, pp. 90-91).

The second major data base relates to the research of another Dutch researcher, Fons Trompenaars, who looked at the impact of culture on business. He addressed about 50,000 questionnaires to managers around the world (Bing, 1995, p. 6). It is interesting to note that unlike Hofstede, who had translated his questionnaire into 20 languages, Trompenaars' questionnaire was only provided in English, arguably creating a bias in relation to the pattern of responses. He used a variety of lens, including "quality of life" (i.e., percentage of respondents opting for individual freedom). This particular question seems to have some parallelism to Hofstede's focus on Individualism-Collectivism. This particular scale compares 38 countries, finding Canada and the United States the most disposed to individual freedom with Nepal the least disposed. France and the United States are far removed from each other on this dimension with 48 percent opting for individual freedom, whereas the US comes in at 79 percent.

The research frameworks of Hofstede and Trompenaars are quite different, except for an individualism-collectivism dimension (Bing, 1995, p. 10). The full range of Trompenaars dimensions are:

1. Relationships with people.
2. Individualism-Collectivism.
3. Neutral versus affective (unemotional versus emotional).
4. Specific versus diffuse.
5. Achievement versus ascription (achievement versus other attributes).
6. Attitudes toward time (relative emphasis on past, present and future).
7. Attitudes toward environment (harmony versus control of the outside world).

Other theoretical reference points used were a study by Hoppe (1990) which uses some of Hofstede's research methodology (with his permission) and adds in a learning style dimension (David Kolb). A shorter instrument, engineered in collaboration with Hofstede by ITAP International in Princeton, New Jersey, called the "Culture in the Workplace" (CW) Questionnaire was also used to gain current insights into how Hofstede's original findings were holding up a quarter of a century later.

A new instrument with a multi-rater (360°) thrust, researched by the Center for Creative Leadership at Greensboro, North Carolina, called "Prospector", was also examined. It has been used in 14 countries with a database after one year of existence just beginning to come together. Finally, the Honey-Mumford Learning Style Questionnaire and its norms (including some that are by profession and national culture) were used to gain insights into individual differences.

Research Questions

1. Is there a better way of determining how to mix and match cultures in global teams?
2. How can the team members acquire a cultural sensitivity to what the diverse properties of the team mean in terms of the potential for elevated performance?

Methodology

The methodology is longitudinal and builds on and extends research effort reported in the 1997 Academy of HRD Proceedings. (See "Bringing Cross-Cultural Sensitivity to Human Resource

Development: An Example from the Classroom). Research effort has been focused on a doctoral level course on Global Human Resource Development taught annually. It commonly has a high density of foreign students mixed in with US students. In fact, the current class is composed of a 50-50 mix. A total of eleven countries have been represented in recent years (China, Saudi Arabia, England, South Africa, Zambia, Malaysia, Egypt, Indonesia, Iran, Costa Rica and Canada).

The classroom has proved to be a rather useful laboratory for such research and the research inquiry has been aimed at both research questions. This is apparently the only instance in the United States where the "Culture in the Workplace" (CW) survey of ITAP International is being used in a university graduate program. It is primarily used in global corporations incident to expatriation related training programs and is quite expensive. We have been able to acquire it (including machine grading) at modest cost in part because of interest in our research focus.

Students take the CW Survey instrument as well as the Honey-Mumford Learning Style Questionnaire (LSQ) and what is called a Cross-Cultural Assessment Inventory (CCAI). In effect, we end up triangulating the make-up of individuals using three separate and distinct perspectives. The students then have a chance to dialogue deeply and develop a synthesis of what it means. Students are purposely broken down into sub-teams by the professor based on the results, in order to maximize diversity and capitalize on it.

Students also go through some rather involved and realistic exercises where they must mix and match a diverse cultural and learning style inventory to specific tasks to be performed. In one case they match assets to two distinct types of project teams, one focused on strategic planning and the other on management of implementation. They learn in the process that matching must go beyond simple blending of cultural assets and extend to the nature of the task to be performed.

The three reference points mentioned that are purposefully triangulated can be described this way:

1. Culture in the Workplace (CW) Survey. It uses a core set of 24 questions from the Hofstede research. The results provided to students show how they match up as individuals against the United States and five other countries of our selection (Sweden, Germany, South Africa, Japan and Brazil) in the four basic Hofstede dimensions. They also see how the overall class profile matches with these countries. The revelation comes when most find they are more like another country than their own in the various dimensions when they compare the results with the outcome of the original Hofstede study.

2. The Learning Style Questionnaires show the four basic learning styles (activist, reflector, pragmatist, theorist) in terms of individual student strengths versus each (very strong, strong, moderate, low, very low). Some find they are strong or low in several areas. Students consider how they can best employ the mix of learning styles in their sub-groups.

3. The Cross-Cultural Assessment Inventory (CCAI) provides an index to cross-cultural effectiveness (ability to perceive cross-cultural interactions from a more open point of view).

Results and Conclusions

1. Foreign students tend to have a broader range of very strong to strong learning styles than those from the United States (e.g., one Malaysian has very strong learning styles in all four learning preferences. Chinese students have tended to be strong across-the-board. This is rare).

2. Those who have been exposed to multiple cultures tend to be well outside the range of what one might expect to find in their basic culture based on Hofstede' cultural dimensions.

3. Use of the Hofstede research results (1980) to typecast people in 1997 is problematic. A current CW Survey result can be at wide variance with the 1980 data even though using the Hofstede based methodology.

4. When people are sensitized to the implications of cultural differences, as done in this "classroom as laboratory" research, they become much more aware of how they need to interact with those from other cultures. It is not a case of trying to interpret differences by formula, but

rather by simple awareness that there are differences and they need to be alert to them and patiently listen.

5. It becomes evident that you need as direct a knowledge of potential team members as you can acquire (e.g., current CW Survey results; awareness of mores; gestures; religion; learning styles; and, specific work background).

6. You intuitively come to believe through observation that diversity in teams provides value added. This is very difficult, if not impossible to prove. It is not something easily subject to control group versus experimental group type analysis. However, the students in the research study talk about the advantage. Whether a result of Hawthorne effect or selective perception (inclined to see positives in this case), there does in fact seem to be a discernible edge over teams from a common culture.

7. Rather than be elegantly academic in how you come up with mixing and matching decisions, simplicity can work best, particularly when you have limited time to make decisions. You can ask the individuals themselves where they fit best, go to third parties and use other resources (e.g., a career record). However, you need to be cross-culturally sensitive. Direct questions, for example, can be viewed as invasive and deeply offensive in some cultures (e.g., the grading of others in how able they are to contribute).

8. You avoid basing decisions re: global team assignments on a single source of information. You need multiple sources and vantage points.

How this research contributes to new knowledge of the field

Research in the area of global team formation, specifically in matching and mixing cultures to team assignments, is sketchy, at best. As indicated, there are only two major data bases to turn to (Hofstede's and Trompenaars) and both are flawed. Hofstede's research seems to have construct validity but the way the sample was drawn is questionable--one company and primarily middle class respondents. Trompenaars' questionnaire was only available in English. The limited re-study by Hoppe in 1990 focused on an elite class (essentially chief executive officers of companies) in 17 of the 40 countries included in Hofstede's basic research.

While there is much being written on the global arena and the role of HRD related activities in it, there is a lack of research directed toward how you determine how to allocate diverse cultural assets across teams, and associated steps that need to be taken to bring about the necessary insights within the teams on how to capitalize on such inherent strengths.

Other than the research of Hoppe (1990), the current research underway with students in the global HRD course at Virginia Commonwealth University, is the only known research to juxtapose cross-cultural differences (Hofstede's dimensions) and learning style differences in considering the best way to deal with the composition of global teams.

References

Adler, N. (1991). International dimensions of organizational behavior. (2nd Ed.) Belmont, CA: Wadsworth Publishing Company.

Bing, J. (1995). The use and misuse of questionnaires in international training. Unpublished manuscript (available from ITAP International, 323 Wall Street, Princeton, NJ 08540.

Hall, E. & Hall, M. (1990). Understanding cultural differences. Yarmouth, ME: Intercultural Press, Inc.

Hoecklin, L. (1995). Managing cultural differences. Reading, MA: Addison-Wesley Publishing Company.

Hofstede, G. (1993). Cultural constraints in management theories. Academy of Management Executive 7, 81-94.

Hofstede, G. (1991). Cultures and organizations: Software of the mind. London: McGraw-Hill Book Company.

Hofstede, G. (1984). Culture's consequences. London: Sage Publications.

Hoppe, M. H. (1990). A comparative study of country elites: International differences in work-related values and learning and their implications for management. Unpublished doctoral dissertation, University of North Carolina at Chapel Hill, North Carolina.

Marquardt, N. & Engel, D. (1993). Global human resource development. Englewood Cliffs, NJ: Prentice Hall.

Rhinesmith, S. (1996). A manager's guide to globalization. Chicago: Irwin.

Trompenaars, F. (1993). Riding the waves of culture. London: The Economist Books.

Current Status of Diversity Initiatives in Selected Multinational Corporations

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The purpose of this study was to provide information on the status of the diversity initiatives in selected U.S. based multinational corporations. Two methods of data collection were used: semi-structured face-to-face interviews, and document analysis. Eight diversity managers/directors were asked to provide information on their diversity initiatives; the planning, implementation and evaluation of diversity initiatives; factors assisting in their success; barriers hindering diversity initiatives; and future plans for diversity initiatives.

Demographic changes, technological advances, and global competition have forced U.S. corporations to reexamine their policies, programs, and practices. One of the most cited reports on the dramatic demographic changes in U.S. society is Workforce 2000: Work and Workers for the Twenty-First Century (Johnston & Parker, 1987). This report and others (U.S. Bureau of the Census, 1994; U.S. Bureau of Labor Statistics, 1993) indicate that workforce demographic is expected to change dramatically. Demographers have reported that workforce population will include more minorities, varieties of ethnic backgrounds, more aging workers, and people with different lifestyles.

According to Loden and Rosener (1991), this diverse workforce will influence the management of organizations because, for the first time in the United States, managers will face the challenge of dealing with large numbers of diverse groups in the workplace. Therefore, how well organizations deal with the demographic shift of their workforce, from white males to the inclusion of a more diverse workforce, will directly affect their outcomes (Carnevale & Stone, 1995; Caudron, 1992). Managers who want their organizations to remain competitive are concerned about how to implement different programs to incorporate and retain a more diverse body of employees (Jamieson & O'Mara, 1991; Wheeler, 1996). It has become apparent that American competitiveness in the global marketplace will depend on effective human resource development and management (Fernandez, 1993; Winterle, 1992).

Many terms have been used to describe cultural differences in the workforce including cultural diversity, the multicultural workforce, cultural pluralism. However, the most current term used today is diversity. The term, diversity, is more than a name used to describe the presence of multiple cultures in the workforce. Lynch (1989) defined cultural diversity as "the presence within one geographic area of a number of different cultural, linguistic, credal, ethnic, or racial groups" (p. 5). Diversity, in its broader meaning, includes all the ways in which people differ, it encompasses all the different characteristics that make one individual different from another (Griggs, 1995; Hayles & Russell, 1997).

Leaders in some organizations believe that with a diverse employee population, they can better understand customers' needs in ethnic and international markets (Carnevale & Stone, 1995; Baytos, 1995; Griggs, 1995). Researchers have identified a need for studies of diversity in organizations (Battaglia, 1991; Cockburn, 1991; Cox, 1990; Harbeck, 1992; Morrison, 1992; Rynes & Rosen, 1995; Triandis, Kurowski, Gelfand, 1994). Cox (1990) reported that "despite the growing need for understanding the effects of ethnic and racial heterogeneity on organizations, the knowledge base for these issues is appallingly limited" (p. 5). In spite of the rapid growth and interest in diversity, Armitage (1993) stated that "organizations are scrambling to develop diversity programs but find little concrete guidance" (p. 3). Similarly, Noe and Ford (1992) reported that "while training for diversity has increased in popularity, no systematic empirical research regarding the effectiveness of diversity programs has been published" (p. 358).

The purpose of this study was to provide information on the status of the diversity process in U.S. based multinational corporations, to report on the dimensions of the diversity

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initiatives and programs, and to interpret the dynamics of the corporate response to workforce diversity.

Research Questions

This study examined the following major research questions:

1. What are the domestic and international initiatives for managing diversity in corporations?
2. How are the diversity initiatives planned in corporations?
3. How are diversity initiatives implemented in corporations?
4. How are diversity initiatives evaluated in corporations?
5. What factors have assisted in the success of diversity initiatives in corporations?
6. What barriers have hindered the implementation of diversity initiatives in corporations?
7. What diversity initiatives are planned or projected for the future by corporations?

Methodology

This was a descriptive and exploratory study. Two major methods of data collection were used: semi-structured face-to-face interviews and document analysis. The first major method of this study was in-depth, semi-structured face-to-face interviews with workforce diversity manager/directors who are responsible for diversity initiatives in eight selected multinational corporations. Through face-to-face interviews extensive data were collected in order to produce an in-depth understanding of the current status of diversity initiatives in these multinational corporations. The data obtained through the interviews consisted of words in the form of rich verbal descriptions (qualitative data), as well as quantitative data. The quantitative data were utilized to provide the basic evidence, while the qualitative data were used to round out the picture and provide examples. The second major method of data collection used was document analysis. Documents related to the organizational diversity initiatives in the multinational corporations were collected from primary and secondary sources. Documents were solicited from the corporations and from standard literature sources, such as, annual reports, community relations reports, journals, magazines, world-wide-web, newspaper articles, research reports, and diversity-related books. The data obtained from these documents provided insightful and enriched information that was used to confirm and verify the information provided by the study participants during the face-to-face interviews.

The population for this study was composed of the 30 multinational corporations in the State of Illinois listed in the book entitled Directory of Diversity in Corporate America (1994). From those 30 corporations, a sample of eight was randomly selected to participate in the study. The population and sample that was selected for this study was ideal because, in order for a corporation to be included in this directory, it must meet the following criteria: (a) it must have extensive experience with workforce diversity, (b) be multinational corporations, (c) be allocating resources to diversity initiatives, and (d) have launched successful corporate diversity initiatives.

Results

The study participants were asked to describe their domestic and international diversity initiatives. 'Diversity initiatives' for the purpose of this study are specific activities, programs, policies and any other formal processes or efforts designed for promoting organizational culture change related to diversity (Arredondo, 1996).

Domestic Diversity Initiatives. Study participants reported that a total of 116 domestic diversity initiatives are currently in place in their corporations. The majority (88%) of the corporations participating in this study identified 41 or more diversity initiatives. Three of the corporations are utilizing 62 or more diversity initiatives. This study found that the diversity initiatives are being developed in the areas of leadership and management, training and education, community relations, communication, performance and accountability, work-life balance, and career development.

Leadership and Management. The area in which there has been the greatest effort is in leadership and management. Senior management commitment was identified by all study participants. All of them indicated that senior management played a vital role in establishing workforce diversity in their corporations. They also indicated that their organizations had developed a diversity mission statement and that it was linked to the company's strategic business plan. Over half of the corporations have established diversity councils which represent the top people in the organization.

Education and Training. Diversity training and education were considered the second most common initiative. It was considered important for: awareness and skill building; understanding of managing and valuing diversity; educating employees on cultural differences and learning how to respond to differences in the workplace; understanding of the cultural mix within the organization; and assisting employees in learning about the culture and the community the organization is serving. Half of the study participants indicated that their organizations integrated diversity training into other training programs.

Community Relations. Community relations activities were seen as important by all the study participants. The majority (88%) of the corporations studied provided support for diverse cultural programs and scholarships with a diverse focus. Over half (63%) of the corporations sponsored women and minority associations and educational programs for minorities, and provided corporate funding with a diversity focus.

Communications. There were 14 communication diversity initiatives cited by the study participants. Seventy five percent of the corporations in the study had diversity statements in their annual reports. The majority of the corporations had also published other materials such as, brochures, company newsletter articles, company newspaper articles, calendars, journal/magazine articles, posters, and diversity pamphlets to introduce and explain the company's diversity initiatives. The majority of the study participants also indicated that their CEOs and/or senior managers have issued communication statements on the importance of diversity to the business goals of the corporation in forms of letters, memo, and speeches.

Performance and Accountability. The study participants cited 14 performance and accountability diversity initiatives. The majority (75%) of the study participants stated that their corporations had methods for measuring diversity performance. Over half (63%) of the corporations studied have initiatives dealing with management accountability related to diversity performance. Accountability tools such as 360-degree feedback, employee attitude surveys of management behavior, focus groups, employee satisfaction surveys, exit interviews, former employee surveys, evaluations that incorporate diversity objectives, and self evaluations were also used. Some companies attached a percentage of compensations and bonus directly to the accomplishment of diversity objectives.

Career Development and Planning. There were 13 career development and planning diversity initiatives. The majority (63%) of the study participants indicated having established career development and planning initiatives for women and people of color. Sixty three percent of the corporations had identification processes for high potential women and people of color. The majority (63%) of the corporations had employee networks or support groups that negotiate with senior management on career development and other business issues. Several organizations have succession planning, career counseling, and career development linked to diversity initiatives.

Work-Life Balance. Participants cited 13 work-life balance diversity initiatives. Over half (63%) of the corporations studied offered flexible work arrangements. Flexibility in work arrangements included telecommuting, job sharing, working at home, and part-time work assignments. This workplace flexibility was offered by the corporations to accommodate the diverse needs and lifestyles of their employees. Other benefits such as child care centers, resource, and referral services, relocation assistance, family care leave assistance, elder care referral services, and reimbursement for dependent care were also mentioned.

International Diversity Initiatives. The study participants identified the diversity initiatives their corporations were utilizing for managing diversity internationally. All of the corporations studied are very much concerned about the international dimension of diversity. The international diversity initiatives most frequently mentioned were marketing plans for international customers, worldwide diversity conferences, and diversity education and training. Besides the corporations that are already conducting international initiatives, two were at the planning stage of international diversity initiatives. The study participants cited ten diversity initiatives currently being implemented internationally. Half of the corporations studied have marketing plans for international customer base. For their organizations to remain competitive, they need to successfully compete for diverse customers around the world. This often requires to alter their products or services. Other international diversity initiatives were: upper mobility of women to leadership positions in all the countries where they have operations; internal consultants in the United States, who travel abroad to help their company find diversity solutions; community involvement programs; and employee temporary exchange program.

Two (25%) of the corporations are in the planning stage of international diversity initiatives. One of these corporations is working with an external consultant in the planning of initiatives for addressing the international market place. The other corporation is in the process of developing instruments that will assist them in identifying the diversity needs of their business internationally. This organization is in the process of planning the international needs assessment process. Once the needs are identified, they are planning to use that information to develop international diversity initiatives. Two (25%) of the corporations are planning to use external consultants who specialize in global diversity to obtain guidance and direction on addressing the international market place and workforce.

Relationship Between Domestic and International Diversity Initiatives. Six (75%) of the study participants agreed that the same values and principles that guided the domestic diversity initiatives should be the ones that also guide international initiatives. Inclusion and full utilization of people were the most frequently mentioned principles that guided both domestic and international initiatives. This meant giving women and minorities the opportunity to contribute and reach their full potential in the corporations. Inclusion and full utilization also meant that corporations should make efforts to bring in the best minds and more creativity regardless of the individuals' social status, race, and gender. Another similarity mentioned between domestic and international diversity initiatives included the adaptation of products and services to satisfy diverse customer wants and needs to be profitable. They also have to adapt their products and services to the different countries' cultures and customers. According to four (50%) of the study participants many countries face similar diversity issues as the ones found in the United States. Gender, culture, job segregation, pay inequity, and limited advancement opportunities are issues that seem to be present in many parts of the world.

Most Effective Diversity Initiatives. The research participants were asked to identify the diversity initiatives that are the most effective in their corporations. Seven (88%) participants indicated that diversity education and training were among the most effective ones. Leadership and management diversity initiatives were also cited among the most effective. It is interesting to note that although the corporations studied are utilizing more leadership and management diversity initiatives than any other type of diversity initiatives, more participants indicated that education and training diversity initiatives were the most effective. Half of the study participants stated that performance and accountability diversity initiatives were among the most effective strategies. Three (38%) of the study participants reported that communication diversity initiatives were among the most effective in their corporation as well. Although many diversity initiatives were identified as effective, many of the study participants indicated that no single diversity initiative or activity, used in isolation is likely to address diversity effectively.

Diversity Initiatives Planning. To plan diversity initiatives, corporations use two methods of needs assessment: formal and informal. Open door policies and different employee groups are used to gather diversity needs for corporations in informal ways. The formal approach includes ten methods. Employee survey is the most frequently used way for determining the needs in organizations, followed by cultural audits, demographic statistics, and focus groups. Other methods used to identify needs described by the participants were: Employee exit interviews, former employee surveys, electronic brainstorming, and research conducted on diversity by external researchers. Once information is gathered from informal and formal methods, the diversity initiatives are planned. Diversity initiatives are planned at two levels. At the macro level, diversity initiatives are planned at the corporate headquarters. At this level, the corporate-wide diversity initiatives are planned between diversity departments and top executives. At the micro level, business unit managers plan their own initiatives based on their needs, but always having as reference the macro plan. Seven (88%) of the corporations had both macro and micro planning.

Implementation of Diversity Initiatives. The data revealed that it was the responsibility of business unit managers to operationalize the corporate guiding principles on diversity and implement them. In all the companies, business unit managers are the primary agents in charge of the implementation of diversity initiatives. However, they have been assisted in the implementation process by diversity councils and task forces; internal consultants; and diversity departments. All of the study participants stated that the diversity departments or units have the most responsibility for assisting business unit managers in the implementation of diversity initiatives. Diversity departments are responsible for overseeing and monitoring the implementation of the overall diversity initiatives. Three (38%) of the corporations use diversity councils or task forces to help business units implement diversity initiatives.

Structure. The organizational structure for implementing diversity initiatives varied among the corporations that participated in the study. However, there were some similarities. Half of the corporations have their diversity departments connected or related to the Human Resource (HR) Function. These companies have their diversity managers/directors report to the highest-ranked person of the HR department, who in turn reports to the CEO of the corporation. Therefore, the leader in charge of the diversity department in these corporations is only one level away from the most important person in the corporation.

Evaluation of Diversity Initiatives. The study participants combined cited 12 methods for evaluating diversity initiatives. A basic theme that emerged from the study participants was that evaluating diversity initiatives effectively was difficult and time consuming. Despite the difficulty of evaluating diversity initiatives, all of the organizations in the study were attempting to measure their effects on employees and the organization. The methods most commonly used were employee surveys and data. Six (75%) of the study participants indicated they used employee surveys, and another six (75%) stated that they tracked employee data to evaluate the effectiveness of diversity initiatives. The majority of the corporations considered their diversity initiatives very effective and as having a positive impact on employees and organizations. The study participants were also able to identify six components of diversity initiatives that are difficult to evaluate. They were: the impact of diversity on the bottom-line, the impact of diversity on productivity, diversity initiatives return-on-investment, behavioral changes, employee attitudes and internal readiness.

Factors Assisting in the Success of Diversity Initiatives. In total, the study participants together cited 108 factors assisting in the success of diversity initiatives. Factors assisting in the success of diversity initiatives were classified into the three different categories: (a) diversity department factors; (b) human factors; and (c) work environment factors. Diversity department had the largest number of factors assisting in the success of diversity initiatives. The most frequently mentioned factors under this category were: have a strategic plan for diversity initiatives; integrate diversity initiatives into the corporate goals and priorities; and implement several initiatives simultaneously. The most frequently mentioned factors under 'human factors' were: recognition that diversity is a business imperative; acknowledgment of the benefits of diversity; people personally committed; and open-minded people. The most frequently mentioned factors under the category of work environment were: (a) have a culture that values diversity; (b) top management support, endorsement, and commitment; (c) recognizing that diversity is more than an HR issue; and (d) have a top-down diversity initiatives' approach.

Barriers to Diversity Initiatives. The corporations participating in the study have faced barriers related to: (a) the work environment, (b) people in corporations, (c) diversity initiatives. Barriers coming from the work environment had the largest number of barriers hindering diversity initiatives. The most frequently mentioned barriers coming from the environment were competing agendas and size and complexity of the corporation. Half (50%) of the study participants identified changes in the economy of the corporations as an important barrier hindering the progress of diversity initiatives. Two (25%) of the study participants identified other corporate policies interfering with diversity initiatives as barriers that hinder the development of diversity initiatives. The study participants cited seven barriers that were categorized under barriers of people in corporations. The most frequently mentioned barriers under this category were: (a) people not understanding the value of diversity, and (b) people not fully supporting diversity. The most frequent barriers mentioned under barriers to diversity initiatives included: (a) difficult to evaluate, and (b) difficult to show return-on-investment. In total, the study participants cited 38 barriers hindering the success of diversity initiatives.

Future of Diversity Initiatives in Corporations. In total the study participants reported nine different future plans for their diversity initiatives. In the future companies are planning to continue to implement their current domestic and international diversity initiatives. The most common future plans related to domestic initiatives included: continue to implement current diversity initiatives, but with more vigor; evaluate diversity initiatives more effectively; and get further recognition for diversity work. The most common future plans related to international diversity initiatives include: continue with current international diversity initiatives, but with more vigor; expand diversity initiatives to other countries; and develop a well structured diversity plan and start implementation.

Discussion

The variety of diversity initiatives described by the diversity managers/directors provides clear evidence that the multinational corporations participating in this study are doing much more than required by law. Companies are implementing diversity initiatives because they increase their productivity, and help them respond to diverse markets in more effective ways. These were the major reasons for companies having diversity initiatives, and these initiatives were not related to compliance.

Even though an inevitable consequence of having operations in other countries is greater workforce diversity (Florkowski, 1997), many business leaders until recently did not perceive this consequence in the same manner. International diversity initiatives have not been a major concern for global corporations. A 1994 survey in which 1,500 managers participated, showed that managing a culturally diverse workforce and understanding the external global environment were not ranked as the most important concerns by any of the companies (Neff, 1995). This study, however, revealed that these corporations are planning, developing, and implementing an impressive number and variety of diversity initiatives not only in the United States but also internationally. Moreover, this study revealed that there is a relationship between domestic and international diversity initiatives. Inclusion and full utilization of people regardless of their background, appreciation of cultural differences, and adaptation of products and services to diverse customers were some of the values or principles identified as commonalties between domestic and international diversity initiatives. Probably one of the fundamental findings of this study is the relationship between domestic and international diversity initiatives. Since the management of international diversity initiatives is a somewhat new approach, previous studies have not specifically focused on the relationships between the two. For the participants of this study, diversity initiatives have been valuable and effective not only within the United States, but also in other countries. Essentially, the organizations in this study seem to see diversity initiatives as a way to maximize their competitiveness. According to Florkowski (1997), global diversity management, for all of its uncertainties, holds the key competitive advantage for companies that seek to enter and succeed in international markets.

Training and education seems to be an essential strategy of managing diversity in multinational corporations. Training and education ranked as the second most commonly used strategy in the category of domestic diversity initiatives and number three for international diversity initiatives. Furthermore, the participants in this study considered diversity training and education initiatives among the most effective types of diversity initiatives. This study revealed that diversity training and education is an indispensable part of the overall corporate diversity strategy.

Educational Importance of the Study

The intent of the study was twofold. First, the study was designed to provide an interpretation of the diversity process within multinational corporations to help educators understand the status of diversity within these organizations. From this study, educators will learn about differences in organizational responses to diversity. They will understand the varying levels of diversity concerns within corporations and the different initiatives that are implemented to address diversity in the workplace. The information on workforce diversity from this study will enable educators to: (a) revise their curricula appropriately to reflect changes in the workplace; (b) identify workable strategies for accommodating and managing differences in the workplace; and (c) illustrate for their students the continuing impact of diversity on the organizational culture and climate of these multinational corporations. The second intent of this study was to provide information on the status of the diversity process in organizations to decision-makers, such as human resource managers, training and development specialists, and line managers. The information on workforce diversity from this study can be used for benchmarking within their organizations. In addition, this study may aid in the self-reflective process organizations use to assess their current status and assist them in developing strategic plans that address diversity within their organizations. The information from the study may influence the development of a deeper understanding of diversity processes within organizations. This understanding, in turn, may provide insight and direction for improving practice not only in the field of human resource development, but also in other areas of management. The information may encourage or persuade human resource development practitioners or any person in charge of programs dealing with diversity in organizations to: (a) better assess the needs of the employees, (b) improve the design, implementation, and evaluation of diversity efforts, and (c) identify initiatives to improve the management of a diverse workforce.

References

Armitage, M. A. (1993, May). Managing cultural diversity globally and domestically: A federal model for examining programs and competencies for leader effectiveness. Paper presented at the Eighth Annual Conference of the Society of Industrial and Organizational Psychology, San Francisco.

Arredondo P. (1996). Successful diversity Management Initiatives: A blue print for planning and implementation. Thousand Oaks, CA: Sage Publications.

Battaglia, B. A. (1991). Study of intercultural interaction themes in one healthcare workplace. (Doctoral dissertation, The Fielding Institute, 1991). Dissertation Abstracts International, 52, 1536A.

Baytos L. M. (1995). Designing and implementing successful diversity programs. Englewood Cliffs, NJ: Prentice Hall.

Carnevale, A. P., & Stone, S. C. (1995). The American mosaic. New York: McGraw-Hill, Incorporated.

Caudron, S. (1992). U.S. West finds strength in diversity. Personnel Journal, 71, 40-44.

Cockburn, C. (1991). In the way of women: Men's resistance to sex equality in organizations. Ithaca, NY: ILR Press, New York State School of Industrial and Labor Relations, Cornell University.

Cox, T. H., Jr. (1990). Problems with research by organizational scholars on issues of race and ethnicity. Journal of Applied Behavioral Science, 26 (1), 5-23.

Directory of Diversity in Corporate America. (1994). The comprehensive desk reference (1994-95 Edition). Minneapolis, MN: Institute for Corporate Diversity.

Fernandez, J. P. (1993). The diversity advantage. New York: Lexington Books.

Florkowski, G. W. (1997). Managing diversity within multinational firms for competitive advantage. In E. E. Kossek and S. A. Lobel (Eds.). Managing diversity: Human resource strategies for transforming the workplace (pp. 337-364). Oxford: Backwell Publishers Inc.

Griggs, L. B. (1995). Valuing diversity: Where from...where to? In L. B. Griggs & L. L. Louw (Eds.), Valuing diversity: New tools for a new reality. (pp. 1-14). New York: McGraw-Hill, Inc.

Harbeck, K. M. (Ed.). (1992). Coming out of the closet: Gay and lesbian students, teachers, and curricula. Binghampton, NY: Harrington Park Press.

Hayles, V. R., & Russell, A. M. (1997). The diversity directive: Why some initiatives fail & what to do about it. Chicago: Irwin Professional Publishing.

Jamieson, D., & O'Mara, J. (1991). Managing workforce 2000: Gaining the diversity advantage. San Francisco: Jossey-Bass.

Johnston, W. B., & Packer, A. E. (1987). Workforce 2000: Work and workers for the 21st century. Indianapolis, IN: Hudson Institute.

Loden, M., & Rosener, J. B. (1991). Workforce America! Managing employee diversity as a vital resource. Homewood, IL: Business One Irwin.

Lynch, J. (1989). Multicultural education in a global society. London: Falmer Press.

Morrison, A. M. (1992). The new leaders: Guidelines on leadership diversity in America. San Francisco: Jossey-Bass Publishers.

Neff, P. J. (1995). Global companies: Myth or Reality? In S. J. Garone (Ed) Strategies for Maximum Global Competitiveness (pp. 16-18) (Report number 1137-95-Ch). New York: The Conference Board.

Noe, R. A., & Ford, J. K. (1992). Emerging issues and new directions for training research. In Ferris, G., & Rowland, K. (Eds.). Research in personnel and human resources management (pp. 32-69). Greenwich, CT: JAI Press.

Rynes, S., & Rosen, B. (1995). A field survey of factors affecting the adoption and perceived success of diversity training. Personnel Psychology, 48 (2), 247-270.

Triandis, H. C., Kurowski, L. L., & Gelfand, M. J. (1992). Workplace diversity. In H. C. Triandis, M. Dunnette, & L. M. Hough (Eds.), Handbook of Industrial and Organizational Psychology (pp. 770-827). Palo Alto, CA: Consulting Psychologists Press.

U.S. Bureau of the Labor Statistics. (1993). Statistical report on employment. Washington, DC, p. 9-30.

U.S. Bureau of the Census. (1994). Statistical abstracts of the United States. U.S. Department of Commerce, Washington, DC, p. 400-404.

Wheeler, M. L. (1996). Corporate practices in diversity measurement. (Research Report Number 1164-96RR). New York: The Conference Board.

Winterle, M. (1992). Workforce diversity: Corporate challenges, corporate responses. (Research Report Number 1013-92RR). New York: The Conference Board.

An Empirical Study of the Relationship Between Team Process Interventions and Double-Loop Learning

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The primary purpose of this study was to analyze the extent to which team process interventions helped teams to master double-loop learning, and to determine if a particular type of intervention was more effective than others in bringing about double-loop learning. This paper presents empirical evidence that under laboratory conditions interventions played a key role in team learning outcomes. A particular type of intervention that emphasized assumption surfacing, dialog, and learning was related to higher incidences of double-loop learning as defined by Argyris and Schön (1996). These results indicate that traditional approaches to intervening with teams may be insufficient to facilitate double-loop learning.

The complexity of technological, political, regulatory, and social changes confronting most organizations has made organizational change the central strategic management issue of the 1990s. The ability to cope with often dramatically altering contextual forces has become a key determinant of competitive advantage and organizational survival. How organizations respond to these challenges is the subject of a growing literature on organizational learning. Researching how organizations learn is a daunting task because the values, interests, location of power, and capacity within an organization present an overwhelming array of variables to study and manipulate. However, as acknowledged by Marsick and Watkins in a forthcoming literature review (in press), it is a topic that has captured much interest, and scholars intrigued with this emerging field appear to be highly productive (p. 1). They also found that less research is focused on the effectiveness of organizational learning than on the nature of the learning process itself (p. 2). This observation leads to the question of where learning is located within the organization. According to Argyris & Schön (1996), learning is not disembodied; it comes from individuals and teams that learn on behalf of the organization (pp. 5-7). Learning and change are understood through the ways in which organizational members adapt to old ideas or anticipate new ideas, through the existing structures, management practices and assignments, through their training and development opportunities, and from the external environment.

Given the nature of today's organizational challenges, thinking, problem solving, decision-making, and learning on an individual level are no longer adequate. In isolation, individuals are poorly equipped to respond to these complex demands creatively and effectively. As Senge (1990) noted "Team learning is vital because teams, not individuals, are the fundamental learning unit in modern organizations. This is where the rubber meets the road; unless teams can learn, the organization cannot learn" (p. 10). But not just any learning will do. Organizations are facing changes so complex and comprehensive that organizations must learn to become virtual knowledge warehouses in much the same way that leading-edge logistics practices have transformed inventory availability and utilization. That is, knowledge must be created on-line and just-in-time, and be supported by processes that will deliver what is needed, when and where it is needed.

Problem Statement and Theoretical Framework

Most change strategies, in one way or another, intentional or not, are involved in fostering the learning process. But few of them advocate the need to establish a learning mechanism as an integral part of change. The work advanced by Argyris and Schön (1978, 1996) that focused on organizational learning, the work by Senge (1990) on the five key components of organizational learning, the work

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by Watkins and Marsick (1993) that examined organizational learning capabilities and processes, and the work by Redding and Catalanello (1994) that articulated the team learning model are exceptions. A unifying theme of these scholars is that deliberate mechanisms and capabilities must be developed in order to create the conditions and supports for organizational learning to occur in a way that contributes to high performance. Another unifying theme is that "learning" has a qualitative dimension and that all learning is not equal. Argyris and Schön (1996), borrowing from the work of Ashby, articulated the notion of single and double-loop learning. They wrote:

> We borrow the distinction between single- and double-loop learning from W. Ross Ashby's Design for a Brain (New York: John Wiley and Sons, Inc., 1960). Ashby formulates his distinction in terms of (a) the adaptive behavior of a stable system, "The region of stability being the region of the phase space in which all the essential variables lie within their normal limits" (p. 72), and (b) a change in the value of an effective parameter, which changes the field within which the system seeks to maintain its stability. (p. 21)

Thus, double-loop learning can be understood as the result of collective inquiry into the mental models and theories-in-use of everyday experience that produces a fundamentally reframed conceptualization of a given problem. Alternatively, single-loop learning produces solutions that leave theories-in-use and the values that are implicit within them intact. Long ago Drucker (1959) asked two key questions: "Are we doing it right? or Are we doing the right thing?" (p. 241). "Are we doing it right?" is an example of single-loop inquiry and numerous examples of continuous quality improvements provide testimony for changes that are important, but do not alter the organizational theories-in-use. "Are we doing the right thing?" is an example of the type of inquiry that may lead to deeply questioning assumptions of "how things are done around here."

Argyris and Schön's contribution to organizational learning processes, through their definition of single- and double-loop learning processes, provided the cornerstone of this inquiry, which was to examine team learning processes to better understand what expectations, conditions, and supports are necessary to bring about double-loop learning. The effectiveness of several intervention strategies designed to enhance team problem solving and decision making were tested under controlled experimental conditions in a laboratory setting.

Research Questions The study explored the following research questions:

1. Is there a relationship between team process effectiveness and the team's ability to engage in double-loop learning?
2. Are particular interventions more effective in bringing about double-loop learning than others?
3. Do particular interventions alter a team's interaction style?
4. Does the team's interaction style promote or inhibit the team's ability to engage in double-loop learning?

In response to the first two research questions, six hypothesized relationships were stated which positioned the interventions (two of four possible treatment conditions) in pair-wise comparisons as the independent variables and the learning outcome (double-loop learning or not) as the dependent variable. A second set of fourteen null hypotheses explored the third research question. These hypotheses positioned the intervention as the independent variable and the team interaction style (constructive, passive or aggressive), as measured by the Group Styles Inventory (GSI) (Cooke & Lafferty, 1993), as the dependent variable. The fourth research question was explored using three null hypotheses which positioned the team's interaction style as the independent variable and the learning outcome (double-loop learning or not) as the dependent variable. These hypotheses were used to test the relationships between the teams' styles, as indicated on the GSI (Cooke & Lafferty, 1993) and the incidences of double-loop learning achieved by the teams.

Methodology

The study reported here differs from much of the preceding research in this area in that it is laboratory, rather than field based. Organizational research is typically conducted in a field setting and follows an action research design. Although a laboratory study has significant limitations in terms of generalizability, its utility can be demonstrated if the sample studied is highly representative of the population that would be found in the relevant field setting. The subjects for this study were all working adults, with five to ten years of organizational experience who were pursuing graduate business degrees. Participants were drawn from five graduate business schools in the Chicago area. Five member teams wrestled with two different typical organizational problem situations (Cooke, 1995) under a particular set of interventions guidelines selected from one of four treatment conditions. These four conditions were:

T_1 No intervention (the experimental control)
T_2 Traditional Process Consulting Guidelines (goal clarity, communication, decision making)
T_3 Team Learning Guidelines (assumption surfacing, dialog, reflection on learning)
T_4 Combination Intervention (goal clarity, communication, decision making, assumption surfacing, dialog, reflection on learning).

Research Instruments Three different instruments were used for data collection. Teams explored two problems selected from the Continuous Improvement Situation Participant Booklet (Cooke, 1995). The intervention guides specified the behavioral norms under which the teams operated, and teams reported their perceptions of the team interaction style on the Group Styles Inventory (GSI) (Cooke & Lafferty, 1993).

The intervention guides were developed by this researcher for this project and are conceptually based on the work of Cooke (1992), Argyris (1982), and Senge, Kleiner, Roberts, Ross, and Smith (1994). Understanding group process in terms of two primary components, interpersonal and rational, has a long research tradition. A pathfinder in this area was Maier, who published more than twenty articles on related aspects of group decision making from 1950 to 1965. A research collaborator of Maier's, Hoffman, is also frequently cited in the literature and like Maier has had a major influence on the work of Lafferty and Cooke in the development of numerous simulations and inventories of individual, group, and organizational-level performance. The three categories on the intervention guide used in T_2 and T_4, goal clarity, communication, and decision making, represent the predominant areas of convergence within the literature on facilitating group process (Lee & Freedman, 1984; Schein, 1988; Varney, 1989). Although far from exclusive, lack of attention to these processes has been cited as a chief cause of process loss (Steiner, 1972). The descriptors assigned to each category were selected on the basis of the literature review as principal levers for maximizing the desired behavior.

The major categories on the team learning intervention guide used in T_3 and T_4, assumption surfacing, dialog, and learning, are consistent with the work of Argyris (1970, 1982), Revans (1982), Watkins and Marsick (1993), and Senge et al. (1994). Again, the descriptors assigned to the categories were drawn from the literature and selected on the basis of criticality for double-loop learning. Specifically, the behavioral norms listed on this guide followed Argyris's (1982) template for creating conditions for double-loop learning--that is, to keep the discussion highly focused on the first and second rungs on the "ladder of inference" (as close to the observable data as possible) (pp. 165-174).

These guides were refined in both field and laboratory settings on three occasions. Further consultation with a graphic arts firm, three rounds of revisions, and expert advice from several individuals culminated in a fourth version, which was used for actual data collection.

The Group Styles Inventory (GSI) (Cooke & Lafferty, 1993) is a validated instrument for assessing group interaction styles (Cooke & Szumal, 1994). It is based on the typology of interaction behavior suggested by the work of Maier (1967) and Hoffman (1979). This instrument is a 72-item self-scoring questionnaire which can be administered to team members immediately following a team meeting, simulation, or at designated intervals to an intact work team. When scored, the 72 statements, which respondents evaluate on a five-point Likert scale, are grouped into twelve dimensions of human interaction and plotted on a circumplex. Triads provide the map for interpreting the circumplex through the predominant factors of constructive, passive/defensive, and aggressive/defensive. This particular graphical representation of data transforms the raw scores into normed percentile bands derived from numerous field tests over the life of this instrument. Team members aggregate their individual GSI (Cooke & Lafferty, 1993) results through a simple averaging process to produce a group profile. This group profile reveals a group-level perception of the team interaction style.

Over 80 teams participated in this post-test only, control group research study that yielded usable results from 61 teams. All team sessions were observed by two experienced process consultants and audio taped for later review. The paper and pencil results of the team sessions were independently coded by several raters for the presence or absence of double-loop learning.

Team solutions were coded as double-loop solutions if they contained evidence of the team having fundamentally reframed (or reformulated) the problem. For example, the first problem asked teams to design a solution to a situation where budget constraints prohibited a full training experience for all existing sales team coordinators. Management wanted to know how to meet the big picture objective, which was not completely obvious, and stay within the budget. Within-frame solutions, among other things, suggested that the number of coordinators be reduced, that a few coordinators receive training and then train the others, and that cheaper training be found. Reframed or double-loop solutions suggested that classroom-based vendor-supplied training be replaced with on-the-job training, that the way the sales teams were currently organized be reconfigured, and that customers and sales teams themselves develop new alliances that would render training obsolete and meet organizational objectives more effectively. The double-loop solutions contained evidence that tacit understandings of common organizational "fixes" were made explicit and challenged, assumptions were surfaced and explored, and experiments were planned to test out possibilities.

The second problem presented in the simulation asked teams to make a recommendation advising for or against leasing a recycling system. The scenario revealed a number of factors that may influence the recommendation, the most prominent of which was the financial impact statement. Although the financial data were correct, they were derived from an analysis of the production process from a limited perspective, as if the recycling system were used incrementally, not continuously. Double-loop solutions included evidence of what Argyris (1982) described as ". . . detection and correction of error. Correction of such error requires the conditions of the good dialectic, which begins with development of a map that provides a different perspective on the problem [for example, a different set of governing variables]" (pp. 104-105).

In coding the solutions for both simulation problems, the focus was on an analysis of the main elements that defined the problem situation, the relations between them, and their characteristics. Double-loop solutions contained evidence of "productive reasoning," whereas those that were not double-loop contained evidence of "defensive reasoning." Argyris (1997) differentiated these two types of reasoning in the following way:

> Productive reasoning is concerned with testing one's claims. It prescribes: (1) make premises explicit, (2) make inferences from the premises explicit, and (3) craft conclusions that are subject to independent test. The second type of reasoning is defensive reasoning. It prescribes: (1) make premises implicit, (2) make inferences from the premises implicit, and (3) craft conclusions that are subject to one's own subjective test. (p. 22)

This quote is simply another way of describing the "ladder if inference" (Argyris, 1982, pp. 470-471), which was a key conceptual model that informed the development of the team learning intervention guidelines for this study.

The experimental results yielded nominal data, the individual cases were independent, and the tests involved four independent treatment conditions. According to Tuckman (1994) and Emory (1985) these conditions call for the use of the Chi-Square (χ^2) Test, a nonparametric test for significance. This statistic (χ^2) compares obtained frequencies to expected frequencies and indicates the probability that they are different (Tuckman, 1994, p. 291).

Results and Conclusions

In response to the first two research questions stated above, teams that received an intervention focused on team learning achieved double-loop learning significantly more often than those teams that received no intervention (T_1), a process consulting intervention (T_2), or a combined intervention of team learning and process consulting guidelines (T_4). A particularly interesting finding was the smaller but still significant difference occurring between the level of double-loop learning achieved by those teams exposed to the team learning intervention (T_3) and that achieved by the control groups (T_1). While these results suggest that no intervention at all is not as effective as the team learning intervention, teams who received no intervention whatsoever achieved double-loop learning more often than those teams operating under T_2 or T_4. Although the incidences of double-loop learning were not statistically significantly different for groups receiving no intervention (T_1) from those teams that received either a group process intervention (T_2) or a combination of team learning and process (T_4), a researchable possibility remains that a poorly executed or inappropriate intervention may be worse than none at all.

In addition to these results, a review of the audiotapes from the sessions revealed that teams exposed to T_3 considered a broader field of possibilities in how they formulated the problem. A more dynamic process of inclusion-exclusion (what was considered cogent to the problem) was observable, and different and more strategies were expressed. In other words, the intervention seemed to create a different field within which the problem was anticipated and structured by the teams. For example, teams operating under the team learning guidelines acted more quickly than teams under the other three treatment conditions to separate what was known from what was unknown. They honed in rapidly to voice their perceptions and create a shared understanding of the challenge in front of them. The first actions of these teams, and to some extent the teams subjected to the combined intervention, were to separate facts from assumptions and post them on flip-chart paper. Teams operating under the more traditional process consultation guidelines often spent the first few minutes of their meeting time on role definition and problem-solving strategy. These activities seemed to take place in the absence of any discussion about the problem itself. In fact, the problem seemed not to be related to the teams' process approach to the task.

Another interesting characteristic of the teams operating under the team learning guidelines was that they produced many more pages of notes on flip-chart paper than any of the other teams. It was not unusual during the debrief for these teams to walk the whole group through five or six pages of notes that provided a record of their assumption surfacing process. Teams operating under the other three conditions generally posted their recommendations on one page, but did not record the team session in a way that all team members could access throughout the discussion. Even though the teams operating under the process consulting and the combination guidelines were specifically directed to "attend to meeting facilitation (track ideas on flip chart)," the tendency was to have a person take notes in a notebook, read those notes back to the group occasionally when asked, and only post the final recommendations for the debrief at the end of the session.

When asked about this behavior during the debrief, a frequent response from the teams that charted their entire assumption surfacing process was that "things were happening so fast, and everybody was coming up with so many ideas, it was the only way to keep it all together." Teams operating under the other treatment conditions responded that "we were pretty much in agreement, it didn't seem necessary" or "it would have taken too much time, we wanted to spend the time we had on the solution." Although inferences from this behavior are purely speculative, it appears that teams operating under the team learning guidelines produced a richer and more publicly accessible data base from which to make their recommendations. These differences in early problem formulation and information sharing may have been a factor in the level of uncertainty that was perceived in the problem.

In response to the third and fourth research questions, which were intended to be exploratory in nature, teams who reported an aggressive team interaction style on the GSI (Cooke & Lafferty, 1993), achieved double-loop learning more often than those teams who reported either a passive or a constructive team interaction style. No statistically significant relationship was found between the team interaction style and a specific intervention.

These findings, though preliminary, are at odds with many previously published studies (Maier, 1963, 1967; Hoffman, 1979; Hirokawa, 1985, 1988; Kernaghan & Cooke, 1987, 1990; Cooke & Szumal, 1994). These studies went beyond the present one in that they examined not just solution quality but solution acceptance as well. At the risk of oversimplifying the results of these studies, the thrust was that the more constructive the interaction style, the more likely the team was to produce a high-quality solution that was highly accepted by the group. Solution acceptance was not examined by this study, but solution quality (demonstrated by double-loop learning) was. The findings show that there is a statistically significant difference between the aggressive group interaction style and either the passive or constructive group interaction styles and double-loop learning. Whether or not the aggressive interaction style reported by teams that engaged in double-loop learning interferes with the teams' commitment to their results remains to be examined.

Contributions to Research and Practice

These empirical results strongly suggest that interventions play a key role in shaping team problem-solving and decision-making processes. Departing from the traditional process consultation approach through the use of the team learning intervention produced significantly more incidences of double-loop learning. Given the mandate for learning as a critical competency for today's organizations amid highly uncertain and unpredictable external environments, this study argues for a reconceptualization of both the study of team learning and the practice of supporting and assisting teams in achieving reframed solutions to difficult organizational problems. The results of this study suggest that the extent to which interventions mediate teams' cognitive competencies, and help teams move from unvoiced individual perceptions of a problem to a shared understanding and collective action, may be a determining factor in the depth of the learning outcome.

The results of the exploratory questions posed in this study indicate that teams that achieved double-loop learning perceived their team interaction style as more aggressive than teams that did not achieve double-loop learning. This finding poses a dilemma for those who study team interaction processes and who consult with teams, because the prevailing wisdom and practice strongly links constructive team behaviors to high quality solutions. Few organizational researchers or policy-making practitioners would dispute the need for double-loop learning under certain conditions. However, the degree to which scholars and practitioners continue to espouse currently accepted conceptualizations of productive team behaviors and process interventions that reinforce those behaviors may be at cross purposes to achieving double-loop learning. If further research should continue to support the findings of this study, then there appears to be a great deal of work to do on reframing existing theories of team development, intragroup communication, and group dynamics, and on discovering and rewarding team behaviors that facilitate the achievement of double-loop learning.

Implications for Human Resource Development Practice The possibility that an intervention focusing on assumption surfacing, dialog, and reflection on learning is related to increased incidences of double-loop learning has profound implications for human resource development (HRD) professionals. To the extent that organizations wish to support and develop the abilities of teams to engage in double-loop learning in their quest to become learning organizations, HRD practitioners will be asked to adopt new roles. Although many HRD practitioners have often functioned as trainers in the past, now their challenge will be to prepare and consult with teams that must work as effectively with uncertainty as they do with certainty.

Existing practices regarding team selection, building, role modeling, empowerment, training, performance expectations, rewards, and intervention and consulting skills must be reviewed to discover ways in which they support or deter double-loop learning. Existing organizational frames for productive team interaction, including such constructs as trust, cooperation, safety, openness, and affiliation, may be inadequate to provide a basis for consulting to teams. Supporting teams in a consultative manner, by naming norms (or simply allowing them to persist on a tacit level) that are inconsistent with the level of discomfort that teams may experience as they voice and deeply question assumptions, may do more harm than good.

These results, obtained in a laboratory setting, do not pose a dilemma of generalizability to practitioners as much as one of transferability. Simple generalization of laboratory results to field settings is a risky proposition because field applications present an entirely different set of intervening variables. On the other hand, the issue of transferability has embedded within it 'learning how to learn" questions. Practitioners must ask several key questions of themselves in order to perceptively

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evaluate the transferability of these research results. These questions are:

1. In what ways does reconceptualizing team problem solving as three elements (team cognitive competencies, objective elements of the problem, and contextual factors as mediated by the intervention) recast the team learning process in a specific organizational setting?
2. Given the socio-cultural norms of an organization, what issues (power, politics, diversity/team composition) are likely to arise when teams are chartered to tackle strategic issues that require double-loop learning?
3. In what ways do HRD practitioners, as they reflect on their own practice, surface assumptions (governing variables) that may inhibit double-loop learning within the field of HRD?
4. To what extent do HRD practitioners prepare themselves as mentors and role models for achieving double-loop learning?

Suggestions for Future Research Given the limitations of this laboratory study, further research must be conducted to compensate for them. Further research is also needed to build on these findings through more powerful predictive models that link team-level double-loop learning to bottom-line organizational results amid turbulent and unpredictable environmental conditions. Specific recommendations include:

1. Replication of this investigation in field settings, using the intervention guidelines (now revised to be more sensitive to field setting) in real time on actual organizational problems.
2. Field-based studies that test a predictive model for better understanding the influence of existing mental models of team effectiveness on a team's ability to achieve double-loop learning.
3. Research that illuminates best practices for developing team capacity to achieve double-loop learning. Although it may be highly desirable to develop an organization-wide competency in double-loop learning, single-loop learning is often the appropriate and desired skill required to address many organizational problems. A question that remains unanswered, but has loyal followers on both sides of the issue, is: Does an organization build capacity for double-loop learning by increasing skills in single-loop learning, or do high skill levels in single-loop learning actually inhibit the possibility for double-loop learning to occur?
4. Empirical analysis to further define individual, team, and organizational variables that may be related to the successful development and deployment of the capacity to achieve double-loop learning at the team level.
5. Comparative studies of a variety of HRD approaches to preparing and supporting teams that are chartered to address problems that may require double-loop learning.
6. Operationalize double-loop learning, not as a rare event but as a desired organizational capability, and develop a predictive model that links three primary variables: degree of unpredictability and turbulence in the environment, capacity of teams to engage in double-loop learning, and effectiveness of the role of HRD to support and develop the capacity for double-loop learning at the team level.

Upon more firmly establishing the constructs defined in this study, it will be possible to investigate their specific effects within organizations. A small but growing number of researchers of organizations and organizational behavior are increasingly realizing the importance of understanding the context within which organizations operate and the behaviors that manifest themselves at different organizational levels. Thus, the findings contained within this study should be further examined to determine how they interact at levels varying from the individual to the team to the organization and how these interactions affect the capability of the organization to learn.

References

Argyris, C. (1970). Intervention theory and method. Reading: Addison-Wesley.

Argyris, C. (1982). Reasoning, learning, and action: Individual and organizational. San Francisco: Jossey-Bass.

Argyris, C. (1997). Justice and effectiveness. Organization Development Journal, 15 (2), 21-27.

Argyris, C., & Schön, D. A. (1978). Organizational learning. Reading, MA: Addison-Wesley.

Argyris, C., & Schön, D. A. (1996). Organizational learning II. Reading, MA: Addison-Wesley.

Cooke, R. A. (1992). Business simulations: Observer's guide. Plymouth, MI: Human Synergistics: Center for Applied Research.

Cooke, R. A. (1995). Continuous improvement situation participant booklet. Arlington Heights, IL: Human Synergistics: Center for Applied Research.

Cooke, R. A., & Lafferty, J. C. (1993). Group styles inventory. Plymouth, MI: Human Synergistics: Center for Applied Research.

Cooke, R. A., & Szumal, J. L. (1994). The impact of group interaction styles on problem-solving effectiveness. Journal of Applied Behavioral Science, 30 (4), 415-437.

Drucker, P. F. (1959) Long-range planning. Management Science, 4 (4), 238-249.

Emory, C. W. (1985). Business research methods (3rd ed.), Homewood, IL: Irwin.

Hirokawa, R. Y. (1985). Discussion procedures and decision-making performance: A test of a functional perspective. Human Communication Research, 12 (1), 203-224.

Hirokawa, R. Y. (1988). Group communication and decision-making performance: A continued test of the functional perspective. Human Communication Research, 14 (3), 487-515.

Hoffman, L. R. (1979). Applying experimental research on group problem solving to organizations. Journal of Applied Behavioral Science, 15 (3). 375-391.

Kernaghan, J. A., & Cooke, R. A. (1987). The relationship of group process factors to the quality and acceptance of group output. International Journal of Small Group Research, 3 (1), 39-60.

Kernaghan, J. A., & Cooke, R. A. (1990). Teamwork in planning innovative projects: Improving group performance by rational and interpersonal interventions in group process. IEEE Transactions on Engineering Management, 37 (2), 109-116.

Lee, R. J., & Freedman, A. M. (Eds.). (1984). Consultation skills reading. Alexandria, VA: NTL.

Maier, N. R. F. (1963). Problem-solving discussions and conferences: Leadership methods and skills. New York: McGraw-Hill.

Maier, N. R. F. (1967). Assets and liabilities in group problem solving: The need for an integrative function. Psychological Review, 74 (2), 239-249.

Marsick, V. J., & Watkins, K. E. (in press). Organizational learning: Review of research. Alexandria, VA: American Society for Training and Development.

Redding, J. C. & Catalanello, R. F. (1994). Strategic readiness. San Francisco: Jossey-Bass.

Revans, R. (1982). The origin and growth of action learning. Bickly, Kent, England: Chartwell-Bratt.

Schein, E. (1988). Process consultation: Its role in organization development Volume I. Reading: Addison-Wesley.

Senge, P. M. (1990). The fifth discipline: the art and practice of the learning organization. New York: Doubleday.

Senge, P. M., Kleiner, A., Roberts, C., Ross, R. B., & Smith, B. J. (1994). The fifth discipline fieldbook: Strategies and tools for building a learning organization. New York: Doubleday.

Steiner, J. D. (1972). Group process and productivity. New York: Academic Press.

Tuckman, B. W. (1994). Conducting educational research (4th Ed.), Fort Worth: Harcourt Brace College Publishers.

Varney G. H. (1989). Building productive teams. San Francisco: Jossey-Bass.

Watkins, K. E. & Marsick, V. J. (1993). Sculpting the learning organization: Lessons in the art and science of systemic change. San Francisco: Jossey-Bass.

Goal Condition and Work Group Effectiveness: The Use of Group and Individual Goals for Work Groups Performing Interdependent Tasks

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Thirty-three natural work groups in a large "package delivery" organization were used to test the differential impact of goal conditions (i.e., individual goals, group goals, and individual goals given with group goals) upon workgroup effectiveness. The study proposed that work groups given individual goals in conjunction with groups goals would be significantly more effective than work groups given individuals goals and work groups given group goals. The findings demonstrated that goal condition did not differentially affect workgroup effectiveness.

For the past two decades, there has been a dramatic increase in the use of groups to perform work in American organizations. In 1995, it was reported that 90 percent of Fortune 1,000 companies utilize some form of employee-participation workgroup (Lawler, Mohrman, &Ledford, 1995). Since work groups have been identified as an integral link between the individual and the organization as well as being essential building blocks in organizations (Goodman, Ravlin, & Schminke, 1987), there has been an urgent need to identify techniques that increase group effectiveness. The present study suggests that goal setting with the appropriate goal conditions is a much-neglected technique that can enhance group effectiveness by increasing group member effort and appropriate strategy selection.

Although, the goal-performance relationship is well documented (e.g., Locke & Latham, 1990), it has been largely overlooked as an approach for improving group effectiveness. This may be due to the fact that despite the preponderance of interdependent tasks in organizations, most goal setting research has either focused on individuals performing individual tasks (Locke & Latham, 1990) or groups performing independent tasks (e.g., Locke & Latham, 1984). Consequently, the findings from these studies may not be generalizable to group members working on interdependent tasks. Furthermore, few field studies have compared the impact of goal condition (i.e., individual goals vs. group goals) on work groups performing interdependent tasks. The purpose of the present study is to determine if goal condition differentially affects group effectiveness for work groups performing interdependent tasks. A study of the goal condition-group effectiveness relationship may reveal the type of goal conditions that would best serve MBO programs for groups.

Theoretical Background and Hypotheses Development

The propositions for the present study are drawn from several theoretical frameworks. These include goal setting theory, Hackman's "model of work group effectiveness," and social loafing theory. The literature for each framework is briefly reviewed next.

Goal Setting Theory. Goal setting theory is a cognitive theory of motivation based on the assumption that people have desires that can be thought of as specific goals they hope to obtain (Locke, 1968). Support for goal setting theory appears in literature reviews, meta-analytic reviews and surveys of subject matter experts (e.g., Lee & Earley, 1988; Locke & Latham, 1990).

Goal setting affects performance through the direct mechanisms of persistence, direction, and effort and the indirect mechanism of strategy choice. Recently these four mechanisms have been collapsed into two categories, motivation and development of task strategies (Earley, Connolly, & Ekegren, 1989). Motivation includes persistence, direction, and effort and strategy choice involves the development of plans or strategies to perform a task. The following discussion explains how motivation and strategy choice mediate the goal - performance relationship.

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Motivation. Persistence, direction, and effort are direct mechanisms that work together to affect the influence of goals on action. Goals affect intensity by regulating the intensity of effort that the individual exerts on the task. Goals influence duration by leading people to persist in their actions until the goal is attained. Goals affect direction by leading people to direct attention to achieving goals and to take action using goal-relevant activities while ignoring non-goal relevant activities.

Persistence is the duration of effort maintained over time. Since individuals can persist for many hours on a project but exert minimal effort or exert high effort for only a short time, persistence is considered different that effort intensity. Research has revealed that specific, difficult goals lead individuals to persist longer at a task than easy goals (e.g., Bavelas & Lee, 1978).

Direction can be defined as the focused attention of effort toward the goal-related activity (Locke & Latham, 1990). Goals are used to direct attention and action. In order for goals to influence action, they must direct the effort intensity and effort duration toward some activity. First, goals must move the individual toward goal-relevant activities and move the individual away from goal-irrelevant activities. Secondly, goals must influence how the individual activates the knowledge and skills that are needed to attend to the task.

Effort is the third direct mechanism that impacts how goals affect action. Level of effort and arousal are contingent upon the demands placed on an individual who has accepted the demands. When a task requires substantial amount of resources, individuals have to use most of their effort on that task, leaving few resources to use for other tasks. On the other hand, when a task is less demanding, individuals can exert less effort and use the remaining resources to accomplish other tasks. However, greater effort results in greater performance only when there is adequate ability (Kanfer, 1987). That is, if individuals do not have the ability to perform a task, no amount of effort will lead to greater performance.

Strategy Development. Although persistence, direction, and effort have been described as the key motivational mechanisms of goal setting, these mechanisms are not always sufficient to attain a more complex goal. The stimulation of strategy development, an indirect mechanism of goal setting, may also be required (e.g., Earley & Perry, 1987).

Strategy development for tasks is not necessarily automatic and may require conscious problem-solving and creative innovation. Research has demonstrated that when individuals are given a goal, they will develop a strategy to reach this goal (e.g., Buller & Bell, 1986). Although difficult and specific goals are associated with appropriate strategy selection and performance improvement (e.g., Earley, Wojnaroski & Prest, 1987), the goal-performance relationship is influenced by the degree of task complexity, experience with the task, and the level of pressure to perform immediately (Locke & Latham, 1990). For instance, "specific, hard goals" may prod the individual into a chaotic search to find a strategy that may get instant, but inadequate results. On the other hand, a "moderate or a do your best goal" may prompt the individual to take his/her time in selecting a more appropriate task strategy which may lead to better performance.

Although it is well known that goal setting improves individual performance by influencing the individual's direct and indirect mechanisms of motivation and strategy choice, the impact of goals on group performance has not yet been clarified.

Group Effectiveness. Many group models have contributed significantly to how group effectiveness is considered (e.g., Steiner, 1972). Yet, it is Hackman's (1983) "model of work group effectiveness" that illustrates the importance of effort and strategy selection for group effectiveness. Hackman's model is based upon the integration of the small group behavior and job design literature. Hackman proposes that group effectiveness is a joint function of certain group member elements: effort, knowledge, skill, and appropriate strategy selection. Hackman suggests that inputs that increase group member effort and appropriate strategy choice will increase the likelihood that a group will be effective.

Social Loafing and Effort in Groups. Research has indicated that the "group goal-performance" relationship is partially mediated by the amount of effort that group members exert to accomplish the task (e.g., Weldon & Weingart, 1988). However, in order for group members to exert sufficient effort to accomplish a task, social loafing must be eliminated in groups (Hackman, 1990). Social loafing is the decrease in individual effort when individuals work in groups (Latane, Williams & Harkins, 1979). It is assumed that group members engage in a social comparison process when assessing the feedback they receive about their individual performance as well as their group's performance. After determining the gap between the goal and the feedback information, the group members decide to increase their effort only after they assess past effort and performance in relation to that of other group members.

The social loafing findings indicate that the tendency for individuals to reduce their effort in groups has been associated with a lack of identifiability of individual outputs, (e.g., Harkins & Petty, 1982), a lack of evaluation for individual outputs (e.g., Harkins & Jackson, 1985), feelings of inequity (e.g., Kerr, 1983), and perceptions of indispensability (e.g., Comer, 1991). These findings suggest that individual goals and feedback provided to group members may increase identifiability, evaluation potential, and feelings of equity thereby reducing the group members' inclinations to loaf.

Effort and Strategy in Groups. Although Hackman (1990) suggested that group performance depends upon both sufficient effort and appropriate strategy selection, few studies have investigated the impact of goal condition on group member effort and strategy selection. Most of the research on group goal setting has been focused on either a comparison of difficult goals with easy goals (e.g., Klein & Mulvey, 1989) or a comparison of the presence of a goal with the absence of a goal (e.g., Weingart & Weldon, 1991). Although the few studies that have compared the effects of goal conditions on group performance have been conducted as laboratory studies, many have demonstrated that individual goals given in conjunction with group goals is associated with positive performance (e.g., Gowen, 1985-1986).

A few reasons have been cited to explain the benefits of giving both group and individual goals to groups. First, Matsui, Kakuyama, & Onglatco (1987) suggested that individual goals may increase identifiability and prompt group members to increase effort even if their group goals were met. On the other hand, individuals who are on target for their individual goals but not for their group goals, may feel indispensable and therefore they may work harder to achieve the group goals. Thus, giving individual goals in combination with group goals may reduce a group member's inclination to loaf.

Secondly, Mitchell and Silver (1990) found that the subjects in the "individual goal and group goal" condition (IG/GGC), the "no-specific goal" condition (NSGC), and the "group goal" condition (GGC), were twice as likely to use cooperative strategies than the subjects in the "individual goal" condition (IGC). Furthermore, the subjects in IGC, NSGC, and GGC performed significantly better than the subjects in the IGC. The subjects in the IG/GGC outperformed all other goal conditions but were only significantly different from the IGC. The researchers noted that the selection of an appropriate cooperative strategy may serve as a feasible explanation for the differences in performance. Similarly, Crown and Rosse (1995) found that subjects in the "individual and group goal condition" had a strong orientation to maximizing group performance and were most likely than subjects in any other goal condition to use a cooperative strategy rather than a competitive strategy. The researchers suggested that the use of group goals in combination with individual goals, as long as they were not conflicting, may increase the likelihood that group members use a cooperative strategy and exert sufficient effort on interdependent tasks.

Goal Commitment. The strength of the relationship between goal commitment and performance is purported to be contingent upon the amount of variance in goal commitment (Locke, Latham, & Erez, 1988). Locke and Latham (1990) noted that goal commitment refers to an individual's attachment to, or determination to reach a goal and a resistance to altering the goal at a later time. At the individual level, researchers believe that the determinants of goal commitment include: authority, peer influence, external rewards, participation, competition, expectancy and internal rewards (e.g., Locke et al., 1988). For groups, commitment to a group goal refers to the feeling of attachment that group members have to the group goal and the determination that the group members have in attaining the group goal (Klein & Mulvey, 1989). Therefore, it would seem likely that when a group is committed to its goals, it will be effective. Hollenbeck and Klein (1987) proposed that social influence with respect to other's performance, other's goals, and other's goal commitment may have a strong impact on goal commitment.

Matsui, et al. (1987) revealed that individual goals given in combination with group goals induced a higher level of goal commitment than either giving just a group goal or just an individual goal. This finding may be explained by the assumption that group goals may become commitments that bear responsibilities, thus creating social pressure to perform (Bandura, 1986).

This phenomenon may also be explained by the social loafing research which has found that group members who perceive that their co-workers are not willing to commit themselves to the task are inclined to decrease their own contributions to the task (Veiga, 1991). Consequently, group performance may decrease if group members do not demonstrate that they are committed to the group goal. Therefore, a goal condition that elicits social pressure amongst group members may increase commitment towards the group's goal.

Hypotheses

Since sufficient effort has been identified as integral to group performance (Hackman, 1990), the reduction of effort by work group members should have a negative effect on group productivity. The potential for evaluation in the form of individual goals and feedback has been shown to reduce a group member's inclination to loaf (e.g., Harkins & Petty, 1982). Thus, the use of individual goals and feedback may increase the chance that individuals will exert sufficient effort to accomplish a group task.

Using individual goals alone, however, may not be the best goal condition for interdependent work groups. In order to be effective, work groups performing interdependent tasks not only require sufficient effort but they also require cooperative strategies. Therefore assigning a group goal to interdependent work groups should result in the development of cooperative strategies (Mitchell & Silver, 1990). Thus, both individual goals/feedback and group goals/feedback are needed to increase the likelihood that group members exert sufficient effort and select appropriate strategies to accomplish interdependent tasks. Thus,

Hypothesis 1: Goal condition will differentially affect work group effectiveness.
Hypothesis 2: The group in the "individual goals/feedback and group goals/feedback" condition will have the greatest level of work group effectiveness amongst the three goal conditions.

The relationship of goals to performance has been noted to be contingent upon the amount of variance in goal commitment. It is expected that the more the workgroup members are committed to their goals, the greater the effect on workgroup performance. Consequently, those inputs that increase goal commitment for workgroup members will increase workgroup performance. Thus, it is essential to understand the type of goal that most positively impacts group member goal commitment. Research suggests that individual goals given in conjunction with group goals may increase goal commitment by providing specific standards and instilling a responsibility to all group member (e.g., Weingart & Weldon, 1988). Therefore,

Hypothesis 3: The group in the "individual goals/feedback and group goals/feedback" condition will have the greatest goal commitment level amongst the three goal conditions.
Hypothesis 4: Goal commitment will be positively associated with work group effectiveness.

Method

Design. In order to test the hypotheses proposed, a MANOVA was performed on four dependent variables: pieces per hour (pph), scan percentage, turnover and job satisfaction. The independent variable, goal condition was a between-subjects factor with three levels: (1) individual goals/feedback, (2) group goals/feedback, and (3) individual goals/feedback and group goals/feedback. Each of the 33 work groups was randomly assigned to one of the three goal conditions. To assure equal number of groups in all treatment conditions, a block randomization method was used. The study lasted four weeks.

Site, Subjects, and Tasks. The present study was a field study conducted at one Midwestern site of a major transportation company. Participants consisted of 33 pre-existing work groups, comprised of eight to twelve employees, and managed by one supervisor. Each work group's task consists of both interdependent and independent features. Similar to a

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basketball team, the workgroup members have to work alone on some tasks and work together on others. Each workgroup is responsible for sorting, scanning, loading, and dispatching up to 10,000 packages daily. The subjects (n = 395) were primarily male (72.8%), between the ages of 19 and 33 years of age (76.9%) and have worked in their present work group between a month and one year (70.5%).

Procedure. Each of the 33 supervisors posted their work group's goals and feedback on Wednesdays and Fridays for four weeks. These postings were placed on boards that were hung directly in the workgroup area. Depending upon the goal condition that the workgroup was assigned to, the board contained (1) individual goals/feedback, or (2) group goals/feedback, or (3) individual goals/feedback and group goals/feedback.

In addition to the public posting of goals/feedback for each workgroup, the supervisors were instructed to verbally review the goals/feedback with the workgroup as a group during a standard "three minute information session" provided to all work groups on Wednesdays and Fridays.

On the last day of the four- week study, a questionnaire was administered to all the workgroup members to assess goal commitment and job satisfaction.

Workgroup Effectiveness. Since the use of productivity measures rarely tells the whole story about workgroup effectiveness (Hackman, 1990), the present research used both socio-emotional and productivity measures to determine workgroup effectiveness: pieces per hour (pph), scan percentage, turnover and job satisfaction. All four dependent variables were calculated over a four-week period.

PPH. Workgroup pph was defined as the ratio of total number of packages handled to the number of man-hours used.

Scan Percentage. Package scan percentage was defined as the ratio of packages that the workgroup scanned to the total number of packages that the workgroup loaded. This ratio was converted to a percentage.

Turnover. Voluntary turnover was defined as a ratio of total number of employees who voluntary resigned to the total number of workgroup members. The ratio was converted to a percentage and then reverse-coded.

Job Satisfaction. Job satisfaction was defined as an overall measure of the degree to which the employee was satisfied and happy with the job. To assess job satisfaction, three items were taken from the "general satisfaction" scale of the Job Diagnostic Survey (Hackman & Oldham, 1974). Scores for job satisfaction were collected from individuals, aggregated to the group level and averaged for a group score. This questionnaire was administered at the end of the study.

Independent Variable-Goal Condition. There were three goal conditions used in this study: individual goals/feedback (IGs) condition, group goals/feedback (GGs) condition, and individual goals/feedback and group goals/feedback (IGs + GGs) condition. The IGs condition included load pph, scan percentage, and belts stops. The GGs condition included workgroup pph, scan percentage and workgroup belts stops. The IGs + GGs condition included pph, scan percentage, and belts stops for both the workgroup and the workgroup members. All goal conditions required bi-weekly postings and verbal statements of the goals and the feedback.

Goal Commitment. To reflect the three goal conditions used in the present study, goal commitment was measured with three versions of Hollenbeck's et al. (1989) seven-item goal commitment scale. Examples of items used on this version are "I am strongly committed to achieving my individual goals;" "It wouldn't take much to make me abandon my group goals." All items were scored on a five point Likert-scale. Scores from the questionnaire for goal commitment were collected from individuals, aggregated to the group level and averaged for a group score. This questionnaire was administered at the end of the study.

Results

Statistical Tests of the Hypotheses. To test Hypotheses 1 and 2, which states that "goal condition will differentially affect group effectiveness" and "the group in the individual goals/feedback and group goals/feedback condition will have the greatest level of workgroup effectiveness amongst the three goal conditions," a MANOVA was conducted. The results were found not to be significant ($p < .05$) through the use of three multivariate tests-of-significance (See Table 1). In addition, univariate F-tests were utilized to analyze the dependent variables. These F-tests did not reach the .05 significance level (see Table 2).

Four separate ANOVAs, one for each dependent variable, revealed F ratios of non-significance ($p < .05$). A multiple range test was used to test the difference between groups. The Tukey-HSD procedure showed that no two groups were significantly different at the .05 level. Table 4 provides the means scores for each dependent variable.

Table 1.
MANOVA Tests - Of - Significance

Test Name	*F Value*	*Sig. Of F*
Pillais	0.14	.84
Hotellings	0.15	.85
Wilks	0.87	.85
Roys	0.11	

Table 2. Univariate F-Test Results

Dependent Variable	*F Value*	*Sig. Of F*
Job Satisfaction	1.21	.31
Scan %	0.41	.69
Turnover	0.28	.66
PPH	0.37	.76

Table 3. Mean Scores for Variables by Goal Condition

Goal Condition	*Job Sat*	*Scan %*	*Turnover*	*PPH*	*Goal Com*
IG	10.17	74.11	88.81	162.78	28.60
GG	10.65	70.14	88.70	166.75	27.23
IG + GG	9.89	72.96	85.28	156.26	26.34

Note. Total N = 33; n = 11 for all cells.

For hypothesis 3, a one-way ANOVA was performed for goal commitment. For the average goal commitment score, there was no significant difference across goal conditions, F (2, 30) = 2.03, $p < .15$. Table 4 shows mean scores for goal commitment by goal condition.

Concerning Hypothesis 4, goal commitment was not significantly associated with workgroup effectiveness (r = .09, p = .60). In addition, goal commitment was significantly associated to one of the four dependent variables, job satisfaction ($r = .45, p < .01$).

Discussion

The purpose of the present study was to examine the goal-performance relationship for work groups. The hypotheses that "goal condition will differentially affect workgroup performance" and that "groups given individual goals in combination with group goals will have the highest level of workgroup effectiveness" were rejected.

One implication for these findings may be that although all the work groups had the same roles and tasks, their goal conditions may have led them to different conclusions about how to perform their jobs. According to Shea and Guzzo (1989) even in identical technological environments, groups will differ in their degree of task independence, because the amount of cooperation and exchange that occurs is under the control of the group members. Thus, the lack of impact of goal condition on group effectiveness may be due to the idea that goals acted as instructions that defined the level of interdependence among group members. For instance, when workgroup members were given individual goals they may have exerted more effort but may have engaged in less cooperation with other group members, creating a less interdependent task. Yet, when workgroup members were given group goals, they may have executed more cooperation but less individual effort, creating an interdependent task. Finally, when group members were given both individual goals and group goals they may have created a moderately interdependent task by using a cooperative strategy at times and increasing individual effort when necessary. Thus, future studies need to determine if goal condition differentially affects how work groups perform a task.

The third hypothesis which stated that "the group in the individual goals/feedback and group goals/feedback condition will have the greatest goal commitment level amongst the three goal conditions" was rejected. A reason for this may be that different goal conditions may have lead to differences in the way group members performed their task which in turn may have equalized the amount of goal commitment amongst the goal conditions. For instance, groups in the IGs condition set up their task to be independent and therefore the individual goals provided a means to eliminate social loafing and thus resulted in a commitment to individual goals. The groups in the GGs may have set up their tasks for cooperation and collaboration. Thus, they may have felt a social responsibility to the group, which may have resulted in commitment to group goals. The groups in the IGs +GGs may have set up their task to be moderately interdependent warranting an equal commitment to both group goals and individual goals. If this were true, then giving groups IGs +GGs instead of just IGs or GGs would not significantly increase the level of goal commitment.

Previous research has demonstrated a direct causal relationship between goal commitment and performance. Yet, Hypothesis 4, "goal commitment will be positively associated to workgroup effectiveness," was rejected. Two alternative possibilities may explain these results. First, an accurate level of goal commitment may not be calculated by aggregating individual goal commitment scores to the group level. Secondly, since goal commitment may be continually adjusted as a function of information about the direction and the magnitude of performance levels (Vance & Collella, 1990), it is feasible that the gaps between actual performance and goals resulted in the goals being rejected. Since work groups given both individual goals and groups had twice the amount of goals and feedback then the other goal conditions, they had twice as much feedback about their performance and thus may have rejected their goals more often.

In conclusion, this research sought to determine if goal condition affected work group performance. Unlike prior studies assessing the impact of goal conditions, the present study used natural work groups in a field setting and found that goal conditions were not differentially associated with work group effectiveness. However, some limitations need to be mentioned. First, although the sample size was adequate for statistical examination, it can be argued that a larger sample size may have lead to significant results for some of the hypotheses (3 & 4). Secondly, since the workgroup's task was moderately complex, the generalizability of the findings is limited to workgroups engaging in moderately complex tasks.

References

Bandura, A. (1986). Social foundations of thought and action: A social-cognitive view. Englewood Cliffs, NJ: Prentice-Hall.

Bavelas, J. B., & Lee, E. S. (1978). Effects of goal level on performance: A tradeoff of quantity and quality. Canadian Journal of Psychology, 32, 219-240.

Buller, P. F. & Bell, C. H. (1986). Effects of team building and goal setting on productivity: A field experiment. Academy of Management Journal, 29, 305-328.

Crown, D. F., Rosse, J. G. (1995). Yours, mine, and ours: Facilitating group productivity through the integration of individual and group goals. Organizational Behavior & Human Decision Processes, 64, 138-150.

Earley, P. C., Connolly, T. & Ekegren, G. (1989). Goals, strategy development, and task performance: Some limits on the efficiency of goal setting. Journal of Applied Psychology, 74, 24-33.

Earley, P. C., & Perry, B. C. (1987). Work plan availability and performance: An assessment of task strategy priming on subsequent task completion. Organizational Behavior and Human Decision Processes, 39, 279-302.

Earley, P. C., Wojnaroski, P., & Prest, W. (1987). Task planning and energy expended: Exploration of how goals influence performance. Journal of Applied Psychology, 72, 107-114.

Goodman, P. S. Ravlin, E., & Schminke, M. (1987). Understanding groups in organization. In L. L. Cummings & B. M. Staw (Eds.), Research in organizational behavior (Vol. 9, pp. 121-173). Greenwich, CT: JAI Press.

Gowen, C. R. (1985-1986). Managing work group performance by individual goals and group goals for an interdependent group task. Journal of Organizational Behavior Management, 7, 5-27.

Hackman, J. R. (1983). The design of work teams. In J. Lorsch (Ed.), Handbook of organizational behavior (pp. 315-342). Englewood Cliffs, NJ: Prentice-Hall.

Hackman, J. R. (1990). Groups That Work (and Those That Don't): Creating Conditions for Effective Teamwork. San Francisco: Jossey-Bass.

Harkins, S., & Jackson, J. (1985). The role of evaluation in eliminating social loafing. Personality and Social Psychology Bulletin, 11, 457-465.

Harkins, S. G., & Petty, R. E. (1982). Effects of task difficulty and task uniqueness of social loafing. Journal of Personality and Social Psychology, 43, 1214-1229.

Hollenbeck, J. R. & Klein, J. H. (1987). Goal commitment and the goal-setting process: Problems, prospects, and proposals for the future. Journal of Applied Psychology, 72, 212-220.

Hollenbeck, J. R., Williams, C. R. & Klein, H. J. (1989). An empirical investigation of the antecedents of goal commitment. Journal of Applied Psychology, 74, 18-23.

Kanfer, R. (1987). Task-specific motivation: An integrative approach to issues of measurement, mechanisms, processes, and determinants. Journal of Social and Clinical Psychology, 5, 251-278.

Kerr, N. L. (1983). Motivation losses in small groups: A social dilemma analysis. Journal of Personality and Social Psychology, 45, 819-828.

Klein, H. J., & Mulvey, P. W. (1989). Performance goals in group settings: An investigation of group and goal processes. Paper presented at the meeting of the National Academy of Management, Washington, DC. August.

Latane, B., Williams, K., & Harkins, S. (1979). Many hands make light the work: The causes and consequences of social loafing. Journal of Personality and Social Psychology, 37, 822-832.

Lawler, E. Mohrman, S. A., and Ledford, G. (Eds.). (1995). Creating high-performance organizations. Practices and results of employee involvement and total quality management in Fortune 1000 companies. San Francisco: Jossey-Bass

Lee, C, & Earley, P. C. (1988). Comparative peer evaluations of organizational behavioral theories. College of Business Administration, Northeastern University, unpublished manuscript.

Locke, E. A. (1968). Toward a theory of task motivation and incentives. Organizational Behavior and Human Performance, 3, 157-189.

Locke, E. A. & Latham, C. P. (1990). A theory of goal setting and task performance. Englewood Cliffs, NJ: Prentice-Hall.

Locke, E. A., & Latham, G. P., & Erez, M. (1988). The determinants of goal commitment. Academy of Management Review, 13, 23-39.

Matsui, T., Kakuyama, T & Onglatco, M. L. (1987). Effects of goals and feedback on performance in groups. Journal of Applied Psychology, 72, 407-415.

Mitchell, T. R. & Silver, W. S. (1990). Individual and group goals when workers are interdependent: Effects on task strategies and performance. Journal of Applied Psychology, 75, 185-193.

Steiner, I. D. (1972). Group processes and productivity. NY: Academic Press.

Vance & Collella (1990). Effects of two types of feedback on goal acceptance and personal goals. Journal of Applied Psychology, 75, 68-76.

Veiga, J. F. (1991). The Frequency Of Self-Limiting Behavior In Groups: A Measure and an exploration. Human Relations, 44, 877-895.

Weingart, L. R. & Weldon, E. (1988). The impact of an assigned group goal on the performance of individual group members. Kellogg School of Management, Northwestern University, unpublished manuscript.

Weingart, L. R. & Weldon, E. (1991). Processes that mediate the relationship between a group goal and group member performance. Human Performance, 4, 33-54.

Expertise: The Development of an Operational Definition for Human Resource Development

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Regardless of which side of the learning verses performance philosophical fence one chooses, the HRD professional cannot be successful in the development of an organization's human resources without the ability to quantify human expertise. The actual measurement of expertise has never been fully defined, but through a basic understanding of the characteristics of expertise it is possible to formulate an operational definition for application in the field of HRD.

The Recognition That Employee Competence is No Longer Enough

The *human competence base* and how it is developed is "beginning to make sense" to organizations as they start to realize how market value increasingly relies on the knowledge and skills of the organization's employee base (McLagan, 1997, p. 40). This potential to use specific sets of knowledge and skills is what Jacobs (1997) defines as "employee competence" (p. 280), and through the use of any number of analysis tools and methodologies available for identifying the knowledge, skills, and attitudes required by an individual for competent performance (McLagan, 1997; Jacobs & Jones, 1995; Rummler & Brache, 1995; Swanson, 1994), a competent work force is well within the grasp of any organization . But competence is not enough. Today, it is the development of workplace expertise (human expertise) that is of importance because "business success increasingly hinges on an organization's ability to use its employee's expertise as a factor in the shaping of its business strategy" (Torraco & Swanson, 1995, p. 11).

Competence only suggests that an employee has an ability to do something satisfactory, not necessarily outstandingly, or even well. As modeled by the taxonomy of performance (Swanson, 1994, p. 57), the "expertise" required to change a system is significantly different from the knowledge and skills required to maintain a system. Most organizations now recognize that change is inevitable, and that the individual who can work in a complex changing organization is invaluable. As a result, organizations are requiring that employees be top performers, to be more flexible, and to be able to adapt to the "constantly changing world of new strategies, customer requirements, and competitive maneuvers" (McLagan, 1997, p. 45). In short, it is the development of workplace expertise, not competence, that is vital to optimal organization performance.

The Need for an Operational Definition of Expertise

One way the HRD profession can contribute to improving an organization's performance is through "the development and/or unleashing of human expertise" (HRD faculty of the University of Minnesota, 1994). It is widely recognized that the performance of an organization can be evaluated and addressed at three levels – organization, process, and individual job performer – (Rummler & Brache, 1995; Swanson, 1994), and that the primary tool for linking the three levels of performance together is measurement.

Rummler and Brache (1995) argue that "without measures we don't get the desired performance" (p. 135) and that it is only through measurement that performance can be monitored, managed, and improved. Swanson (1994), in a more direct manner, simply notes that "it is foolhardy to talk about development, change, and performance improvement without specifying the measure of performance" (p.53). Thus, logic dictates that the quantification and measurement of expertise is necessary for the enabling of an organization to improve its performance and the performance of its human resources.

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In the context of individual performance and human resource development, expertise is defined as "the optimal level at which a person is able and/or expected to perform within a specialized realm of human activity" (Swanson, 1994, p. 94). As a descriptive definition of human expertise this provides clarity and focus. Expertise is generally thought of as the possession of superior skills or knowledge in a particular area of study. Expertise is also generally recognized as implying proficiency, with an understanding that the individual gains expertise, and thus proficiency, only through experience and training.

Although the actual measurement of expertise has never been fully defined, the importance of quantifying expertise has long been recognized. The general level of expertise possessed by an individual is readily observable through his or her actions and this ease of recognition has promoted misdirected attempts to quantify human expertise; the classification and re-classification of individual *levels of expertise* (Jacobs, 1997; Hoffman, Shadbolt, Burton, & Klein, 1995; Bereiter & Scardamalia, 1993). Unfortunately the classification of human expertise, without the ability to quantitatively measure expertise, has limited utility.

The Search for an Operational Definition of Expertise

To be able to quantify expertise one must first be able to operationally define what expertise is. Entire books, and complete chapters, have been written in response to the question (Chi, Glaser, & Farr, 1988; Slatter, 1990; Ericcson & Smith, 1991; Bereiter & Scardamalia, 1993; Swanson, 1994). The answers have been numerous and they can be categorized and discussed from several theoretical perspectives, including those of cognitive psychology and knowledge engineering.

In the process of developing an operational definition several assumptions will be made. The first of these being that expertise can be discussed in many forms, and that for the purposes of this paper, it is only human expertise that is of concern. The second assumption is that expertise is a journey, not a destination. There is a tendency when engaging in discussions on expertise to inadvertently interchange the two terms: expert and expertise. Expertise is the journey, an active process from which experts periodically emerge, which leads to the third assumption, that every person possesses some level of expertise.

A Summarized Review of the Cognitive Theories of Expertise All focused research on experts and expertise began with the study of chess players by deGoot in 1965. As summarized by Kuchinke (in press), in the fields of cognitive psychology and cognitive sciences the theories on experts and expertise have now transitioned to a third generation of thinking.

The first generation of research explored the individual's basic information-processing capabilities with the resulting "theories of problem-solving being stated in terms of the human information-processing system" and a search for general rules-of-thumb (Kuchinke, in press).

Second generation theories of expertise focused on complex problem-solving and the characteristics of experts as the key to human expertise, as opposed to generic methods of conceptualizing solutions to unique situations. The outcome of this refocused research effort, as summarized by Glaser and Chi (1988) and included in Kuchinke's (in press) update of the current theories and literature, was the identification of several key characteristics of experts. Each characteristic is associated with either how experts solve problems or how experts acquire, process, and retrieve information.

The third generation of expertise theory is still evolving. Based on a realization that there may be no single *expert way*, current theory and research work is examining expertise as an "ability to rapidly organize and process small bits of information into meaningful and creative solutions to specific problems" (Kuchinke, in press).

A Summarized Review of the Knowledge Engineering Theories of Expertise While the cognitive sciences attempted to discover how an expert thinks and what was required to be an expert, knowledge engineering (KE) took a different approach. The focus of knowledge engineers is in the replication of human expertise. Through the processes of trying to create artificial intelligence, knowledge engineering has paralleled the work done in the cognitive fields. In the field of KE the evolution of expertise theory has resulted in five major model classifications of human expertise: heuristic models, deep models, implicit models, competence models, and distributed models (Slatter, 1990).

Expertise, as loosely defined by the *heuristic models*, involves the acquisition of lots of information, including heuristic knowledge, about a specific domain. The heuristic knowledge is

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comprised of the know-how, the "rules-of-thumb", of a specific domain. In the heuristic models, expert problem-solving entails the extraction and application of domain specific information and heuristic knowledge.

Deep models advanced the general theory of expertise by suggesting that experts use a variety of deep knowledge structures (as opposed to the shallow knowledge structures emphasized by the heuristic models). It is believed that these deep mental models created by the domain expert result in better problem-solving, and provide better explanations of expertise then the ones bounded by the limitations of the heuristic models.

Implicit models attempted to explain expertise by differentiating between implicit knowledge and explicit knowledge. Explicit knowledge is defined as the combination of shallow and deep knowledge, while implicit knowledge is representative of the "nonarticulable experience-base knowledge that enables a skilled expert to solve a task in an effortless, seemingly intuitive fashion" (Slatter, 1990, p. 141).

Competence models make a distinction between domain knowledge (static knowledge) and task knowledge (action knowledge). The implication being that expertise is a competence-level term denoting the potential for doing something. This approach recognizes that experts know a great deal about a specific domain and that experts use this knowledge to effectively solve problems. The task knowledge, which is gained from the practice of domain specific behaviors, is compiled by the expert with his or her domain knowledge in an ongoing search for better ways to do things, including problem-solving.

The fifth class of KE expertise models, *distributed models*, equate expert knowledge as a combination of domain knowledge, task knowledge, and cooperative knowledge (knowledge about how one communicates and interacts with others). The underlying assumption of distributed models is that, in a complex technological society, the expertise needed to solve a problem may be distributed among many individuals. Consequently, these models are more concerned with what an expert must know to cooperatively solve problems with others.

An Examination of the Elements of Expertise as a Means of Defining Expertise

Despite thirty years of advancing research on the topic, no single operational definition of expertise exists. Even though a large body of knowledge has been, and continues to be, added to our understanding of the nature of expertise by the cognitive psychologists, cognitive scientists, and knowledge engineers through their research into the domain of expertise, they have been unable to provide a single unified response to the posed question: What is expertise?

Kuchinke's (in press) review of the expertise theories, and Slatter's (1990) summary explanation of the KE expertise models, have shown through a lack of consensus, that human expertise can not be operationally defined by its processes. While the lack of a definition is disappointing, the combined summary has brought to light several common, or shared, elements in the various theories of expertise. Briefly stated as foundational concepts of expertise, these shared elements are (1) expertise is a dynamic state, (2) expertise is domain specific, and (3) the basic components of expertise are knowledge, experience, and problem-solving.

The most important concept of human expertise is that it is a dynamic state. Expertise is seen by the theorists as an internal process of continuous learning by the individual; a constant acquisition of knowledge, reorganization of information, and progressive solving of problems. The importance of recognizing expertise as a dynamic state lies in the realization that a person never stops acquiring expertise. Bereiter and Scardamalia (1993) summarized the dynamic characteristic of expertise in their descriptive comparison of experts and non-experts. The "career of the expert is one of progressively advancing on problems constituting a field of work, whereas the career of the non-expert is one of gradually constricting the field of work so that it more closely conforms to the routines the non-expert is prepared to execute" (p. 11).

The second shared element, that of expertise being domain specific, may have the most impact on the future creation of programs designed to develop expertise in individuals. How significant is this second foundational concept? Research indicates that "there is little evidence that a person highly skilled in one domain can transfer the skill to another" (Glaser & Chi, 1988, p. xvii). The demonstration of expertise in one domain is no guarantee of expertise in other areas, however, it may be that "certain task domains are more generalized then other areas, such as applied mathematics" (Glaser, 1985, p. 7). Cognitive psychologists have theorized that "there are some domains where nearly everyone becomes an expert, like reading English words" (Posner, 1988, p. xxxi). Never the less, the majority of research suggests that extensive, specialized knowledge is "required for excellence in most fields" (Gleespen, 1996, p. 502).

The basic components of expertise was the third foundational concept highlighted by the review of the expertise models and theories. While there was not always agreement among the researchers as to which component took precedence, all identified in some manner knowledge, experience, and problem-solving as being the distinguishing points of difference between experts and non-experts. These three common elements can be viewed as the fundamental components of human expertise, and it is reasonable to expect that from this third foundational concept that an operational definition of expertise can be developed. Based on the commonalty of the three components human expertise could be defined as a combination of domain specific knowledge, experience, and problem-solving skills.

An operational definition, like a theory, must have utility, simplicity, and coherence (Gilbert, 1978, p. 3). As a possible operational definition this posed definition of expertise has simplicity, and in its conceptual application appears to have utility. However, to validate the proposed definition a closer examination of each of the three components is required.

The component of knowledge. Knowledge appeared in every reviewed theory and model of expertise, and in almost every case it was either descriptively different, or there were multiple types of knowledge specified.

Depending upon the theories or models being examined, the knowledge required for expertise could be implicit, explicit, shallow, deep, heuristic, domain knowledge, task knowledge, and/or cooperative knowledge.. Bereiter and Scardamalia (1993) noted that "every kind of knowledge has a part in expertise" (p. 74). Their definition for "every kind of knowledge" included what they classified as the obvious kinds of knowledge – procedural knowledge and formal knowledge – as well as what they referred to as the less obvious kinds – informal knowledge, impressionistic knowledge, and self-regulatory knowledge.

While there may be some disagreement among the theories and models regarding the specific type of knowledge required for expertise, the theorists are in agreement on two points. First, that for the purposes of expertise, knowledge is, and has to be, domain specific. Second, that knowledge is an interactive component of expertise, one of the requirements for expertise, but not expertise in itself. As noted by Bereiter and Scardamalia (1993), non-experts as well as experts have knowledge, "the difference is in how much they have, how well integrated it is, and how effectively it is geared to performance" (p. 74).

The component of experience. The second common component gleaned from the theories of expertise is that of experience. Just as it is recognized that all experts are knowledgeable, it is also understood that all experts are experienced. Based on their studies of master chess players (Chase & Simon, 1973: as cited in Posner, 1988), "to achieve a master level of expertise a player had to spend between 10,000 and 20,000 hours staring at chess positions" (p. xxxi). A number of years later, through the studied biographies of experts in many fields, Hayes generalized that 10,000 hours was the amount of time required to gain expert experience (cited in Bereiter & Scardamalia, 1993, p.17). Thus it has been hypothesized from the research, but not verified, that to become an expert one must have the equivalent of 10 years of combined studies and related experience.

Based on the experience component of expertise, the important question would seem to be not what is expertise, but rather what can be done to speed up the process of acquiring expertise. Taking actions in this direction, however, would be premature for two reasons. First, the term experience, like that of expertise, is a term of varied meanings currently lacking qualifying and quantifying boundaries. Second, when related to expertise, and specifically to the development of human expertise, experience (like knowledge) is an interactive component of expertise and is heavily dependent upon the type and quality, as well as the quantity, of the events experienced by the individual. As Bereiter and Scardamalia (1993) observed in the performance of equally experienced school teachers, the training received and the number of years worked experience "distinguishes old-timers from beginners, but does not distinguish experts from experienced non-experts" (p. 81).

The component of problem-solving. The key to expertise thus appears to lie in the third component, an individual's propensity to solve problems. The knowledge engineers, in attempting to replicate the process of applying expertise, have viewed problem-solving as the core concept of expertise. The concept of problem-solving as the primary component of expertise has also been heavily supported by the research of cognitive psychologists and scientists, as summarized by Robert Glaser in his *Thoughts on Expertise* (Glaser, 1987: as cited by Chi, Glaser, & Farr, 1988), and Bereiter and Scardamalia (1993) took the emphasis on this concept one step farther by describing problem-solving as the dynamic element in the growth of expertise.

Problem solving, as the term is currently used in cognitive psychology, constitutes some amount of searching and/or deliberation in order to find a way to achieve a goal, a concept that defines a problem as any non-routine purposeful activity (Bereiter & Scardamalia, 1993).

Wertheimer, an early gestalt psychologist whose studies centered on insightful learning, focused on the abilities required by the individual to solve problems effectively. In his book *Productive Thinking*, Wertheimer placed the emphasis on the type of solution used for solving a problem rather than on the problem itself. Wertheimer identified two types of solutions: Type A solutions in which there is originality and insight, and Type B solutions in which old rules are applied (Hill, 1971). Wertheimer believed that both types of solutions depended upon the previous experience of the problem-solver, noting that "the prime difference was in the originality used by the problem-solver to organize information," a characteristic unique to Type A solutions (Hill, 1971, p.102). Applying Wertheimer's theory of problem-solving to the concepts of human expertise it can be reasoned that understanding implies not merely a logical correctness, but a perception of the problem as an integrated whole, which in turn leads to an insightful solution.

Wertheimer's concepts of *real understanding and insightful solutions* can be seen at the core of Bereiter and Scardamalia's (1993) comparison of expert and non-expert problem-solving. Experts are progressive problem solvers while "the problem-solving efforts of the non-expert is taken over by well learned routines ... aimed at eliminating still more problems thus reducing the activity even further" (p. 81).

A Proposed Operational Definition of Human Expertise

From this examination of the components of expertise it can be seen that non-experts can have vast amounts of knowledge, non-experts can have many years of experience, and non-experts can also solve problems. While the posed definition of expertise as a combination of knowledge, experience, and problem-solving has simplicity and utility, it can be seen that attempting to define expertise by its components fails to meet the criteria of coherence. A final option is to attempt to base the formulation of an operational definition on the characteristics of displayed behavior. This approach carries a degree of practicality with it as the presence of expertise is readily recognized in an individual's actions.

Defining Human Expertise by the Characteristics of Displayed Behavior Experts are capable of doing things at a higher level, have more knowledge, a greater skill level, and better solutions (VanLehn, 1989). The expert-novice research of different occupations has verified that this is true (Glaser & Chi, 1988; VanLehn, 1989; Ericcson & Smith, 1991). But, the research itself has been driven by the recognized fact that there were observed differences in the displayed behavior of individuals engaged in the same activities. Thus the concept of "demonstrated behavior" must be found at the core of an operational definition of human expertise.

Performance as a displayed characteristic of an individual's actions. Behavior, as applied to the discussion of human expertise, implies an intended behavior, or action, on the part of the individual, and an action has a consequence, it terminates with a result. Results, and the actions which lead to them, are measurable. Gilbert (1978) stated that the result of behavior should be viewed in the context of value, "the consequence as a valuable accomplishment," a "valuable performance" (p. 17). Gilbert defined individual performance with the aid of a mathematical formula (Performance = Behavior → Consequence), equating individual performance to a transactional relationship involving both a behavior and its consequence (p. 16).

Performance, especially a valuable performance, can be assessed in terms of time, quality, quantity, and ultimately, cost. Performance can be quantified as a comparison of the value of the result to a predetermined standard. The measurement of performance can be applied to the individual, process, or organization (Rummler & Brache, 1995; Swanson, 1994), and at the individual level, performance is representative of the effectiveness of the consequences of an individual's intended behavior, or actions.

Competence as a displayed characteristic of an individual's actions. Morf (1986) operationalized a definition of individual performance, by stating that it "is a function of the interaction of the person and the work environment" (p. 113). Morf reduced his definition of individual performance to the formula Performance = Competence x Work Environment, claiming that his formula demonstrated a relationship between the three unobservable constructs, thereby "help(ing) to structure and explain the chaotic and confusing empirical world around us" (p. 111).

The purpose here is not to debate the validity of such a formula, but too only show it as evidence that some type of relationship exists between individual performance, competence, and expertise.

Morf (1986) defined the variable Competence as the product of "the worker's motivational dispositions and abilities that are relevant in the context of work" (p. 15). This is a key point as Morf based his performance theory/formula on the premise that "the aspect of the worker most frequently influenced by performance is ability levels," which Morf equated to the "new skills developed and new knowledge acquired in the very process of doing a job" (p. 14). In other words, the key element in Morf's formula for performance is expertise.

Gilbert, in his book entitled *Human Competence* (1978), discussed the concept of human competence and individual performance in depth. Unlike Morf, Gilbert saw competence not as a component of performance, but as a function of "worthy performance" expressed as "the ratio of valuable accomplishments to costly behavior (Worthy Performance = Valuable Accomplishment / Costly Behavior)" (p. 18). In Gilbert's mind *competent people* where those individuals who could create valuable results without using excessively costly behavior. The quantified term, competence, was used by Gilbert as the measure of efficient behavior, and his standard of competence was "exemplary performance". Gilbert qualified exemplary performance as the "historically best instance of performance" (p. 30), stating that "exemplary performers do things more easily than others do them" (p. 40).

The worthy performance of Gilbert's (1978) competent individual, the exemplary performer, can be shown to be a product of the work environment and the individual's *repertory of behavior*. Gilbert's explanation of a person's repertory of behavior highlighted specialized responses, knowledge, and an understanding of a specific area (p.75), and emphasized the need to recognize that "knowledge deficiencies were the most important problems of behavior repertory" (p. 107). In short, Gilbert has identified experts (exemplary performers) and expertise (repertory of behavior) as the standard and the key element of competence, respectively.

Competence can thus be seen as a displayed characteristic of expertise, not as expertise itself but as very behavior specific, definable, and measurable subsets within an individual's domain of expertise.

The Formulation of an Operational Definition of Human Expertise Through the examination of the characteristics of individual performance and competence, as measures of effective and efficient behavior, the remaining pieces of the definition of human expertise have been uncovered. As previously noted, we recognize expertise in others by their demonstrated actions. Expanding upon this observation: we recognize experts as those individuals who do things better than anyone else. Experts, in their area of expertise, demonstrate their acquired expertise through outstanding performance. Based on the preceding discussions, this means that experts can consistently do things more effectively and efficiently than non-experts.

Human expertise can thus be operationally defined by these two desired characteristics of displayed behavior as *the consistent demonstrated actions of an individual which are both efficient in their execution and effective in their results*. In short, human expertise is the ability of the individual to consistently do the right thing in the right way.

However, before completely accepting this definition of human expertise a question may be raised regarding the lack of, and/or need for, a reference to outstanding performance and the associated expectation that it readily observable within the domain of expertise as well as periodically seen in related domains. One can not deny the importance of the level of expertise achieved by some individuals, but outstanding performance is a descriptive characteristic of the desired destination, not of the journey. The intent of this paper was not to define, identify, or quantify the term of expert, the intent was to develop an operational definition of human expertise, and the definition being developed fulfills that intent.

The Implications for HRD

Despite whether one chooses to view expertise as an output of learning or as an input to performance, an operational definition of human expertise, a definition which has simplicity, utility, and coherence, gainfully positions the HRD professional with a better understanding of the requirements for the development of the organization's human resources.

The implications of this conceptual approach to human expertise are many and varied. To begin with, such an unpretentious definition of expertise may be difficult to accept. In fact, the argument could be presented that the definition just proposed is not one of human expertise, but rather a definition of human competence. At a first glance this would appear to be true, after all an individual must first possess a minimum degree of expertise in some area to be able to demonstrate competence in that area.

Continuing along this line of thought, it would appear that the proposed operational definition of human expertise could be the kindling for a fiery debate between which is better, expertise or competence? This would have to be considered a foolish debate, a classic comparison of apples to oranges. While clearly linked, and unquestionably similar in nature, expertise and competence are distinctly different.

As previously noted, competence can be visualized as subsets of expertise. In other words, competence is displayed to others as effective and efficient actions, but very task specific actions and therefore found within an individual's domain of expertise and not encircling it.

As a second point, competence, with its primary goal being efficient action, is both narrowing by nature and static, unlike expertise which is dynamic and expanding. Competence is seen and described as a desired outcome (McLagan, 1997), the destination; while expertise is clearly a process (Bereiter & Scardamalia, 1993), the journey.

A third and final point, competence is limited to a very specific domain, the individual's area of expertise, while expertise, also recognized as domain specific, is not limited to a single domain but often extends into several related domains.

At a more practical level, the proposed operational definition of human expertise allows the HRD professional to quantify human expertise, which in itself has some significant implications to HRD. It has always been understood that the acquisition of expertise required study, practice, and experience, what was never clear was how much of each was needed. The result of this lack of understanding has been a "more-is-better" approach to providing training. The proposed operational definition of human expertise, coupled with the analysis tools currently available to the HRD professional, allows experts within the organization to be benchmarked in qualitative and quantitative terms. This in turn permits the development of focused training programs designed to accelerate the acquisition and transfer of expertise.

The downside of being able to quantify human expertise is that there will be a desire and tendency by some representatives of the HRD profession to create a work force of experts. An organization's training resources should be focused on programs designed to raise the individual's, and ultimately the organization's, overall level of expertise, and not for developing experts. Experts are self-motivated and self-monitoring (Bereiter & Scardamalia, 1993; Glaser & Chi, 1988), they develop automatically (Glaser, 1985). The purpose for benchmarking experts should be to establish appropriate standards for competence, and as a result, the focus of training should be to develop the competence required to maintain and support the processes of the organization.

The need to quantify and measure expertise can be associated with the concept of expertise being at the core of performance. *The danger to the organization lies in electing to develop experts instead of expertise.* Rummler and Brache (1995) emphasize that, while failure to measure the right things results in no performance improvement, choosing to measure the wrong things (or measuring the right things for the wrong reasons) results in a loss of performance.

Conclusion

Human expertise is clearly a complex, multifaceted phenomenon, but by the means of an operational definition, expertise can be expressed in measurable terms. Human *expertise* is defined as:

> displayed behavior within a specialized domain and/or related domain in the form of consistently demonstrated actions of an individual which are both *optimally* efficient in their execution and effective in their results.

Human competence, a related construct and component of expertise, can also be expressed in measurable terms. Human *competence* is defined as:

> displayed behavior within a specialized domain in the form of consistently demonstrated actions of an individual which are both *minimally* efficient in their execution and effective in their results.

Through the use of an operational definition of expertise and the recognition of domain specific knowledge, experience, and problem-solving as being the elements of human expertise, the HRD profession gains access to one of the most powerful tools for improving performance: human expertise.

References

Bereiter, C., and Scardamalia, M. (1993) Surpassing ourselves: An inquiry into the nature and implications of expertise. Chicago: Open Court

Chi, M. T. H., Glaser, R., and Farr, M. J. (1988). The Nature of Expertise. Hillsdale, NJ: Lawrence Erlbaum.

Ericcson, K. A., and Smith, J. (1991). Prospects and limits of the empirical study expertise: An introduction. In K. A. Ericcson and J. Smith (eds.), Towards a general theory of expertise: Prospects and limits. (pp. 1-38). Cambridge: Cambridge University.

Gilbert, T. F. (1996). Human competence: Engineering worthy performance (Tribute Edition). International Society for Performance, Amherst, MA. HRD Press.

Glaser, R. (1985). The nature of expertise. Occasional Paper No. 107. The National Center for Research in Vocational Education. Columbus, OH. Ohio State University.

Glaser, R. and Chi, M. T. H. (1988). Overview. In M. T. H. Chi, R. Glaser, and M. J. Farr (eds.), The Nature of Expertise (pp. xv - xxviii). Hillsdale, NJ: Lawrence Erlbaum.

Gleespen, A. V. (1996). How individual expertise may be socially constructed: A literature review. Holton, E. F. (ed.). 1996 AHRD Conference Proceedings. Austin, TX: Academy of Human Resources Development. pp. 497-504

Hill, W. F. (1971). Learning: A survey of psychological interpretations:(revised edition) Scranton, OH: Chandler Publishing.

Hoffman, R. R., Shadbolt, N. R., Burton, A. M., and Klein, G. (1995, May). Eliciting knowledge from experts: A methodological analysis. Rational Behavior and Human Decision Processes: 62(2) 129-158

HRD Faculty of the University of Minnesota (1994). Human Resource Development Definition. St. Paul, MN

Kuchinke, K. P. (in press). Employee expertise: The status of the theory and the literature. Performance Improvement Quarterly.

Jacobs, R. L. (1997). The taxonomy of employee development: Toward an organizational culture of expertise. Torraco, R. J. (ed.). 1997 AHRD Conference Proceedings. Baton Rouge, LA: Academy of Human Resources Development. pp. 278-283

Jacobs, R. L. and Jones, M. J. (1995). Structured on-the-job training: Unleashing employee expertise in the workplace. (pp. 3-7). San Francisco, CA: Berrett-Koeher

McLagan, P. A. (1997). Competencies: The next generation. Training & Development 51(5), 40-47

Morf, M. (1986). Optimizing work performance: A look beyond the bottom line. (pp. 107-119). New York: Quorum Books

Posner, M. I. (1988). Introduction: What is it like to be an expert.. In M. T. H. Chi, R. Glaser, & M. J. Farr (eds.), The Nature of Expertise (pp. xxix - xxxvi). Hillsdale, NJ: Lawrence Erlbaum.

Rummler, G. A. and Brache, A. P. (1995). Improving performance: How to manage the white space on the organization chart. (2nd edition) San Francisco, CA: Jossey-Bass

Slatter, P. E. (1990). Models of expertise in knowledge engineering. In H. Adeli (ed.), Knowledge Engineering: Vol. 1. Fundamentals (pp. 130-154). New York: McGraw-Hill

Swanson, R. A. (1994). Analysis for improving performance: Tools for diagnosing organizations and documenting workplace expertise. (pp. 97-100). San Francisco, CA: Berrett-Koeher

Torraco, R. J., and Swanson, R. A. (1995). The strategic roles of human resource development. Human Resource Planning 18(4), 10-21

VanLehn, K. (1989). Problem solving and cognitive skill acquisition. In M. Posner (ed.), Foundations of Cognitive Science (pp. 560-569). Cambridge, MA: The MIT Press

A Methodology for a Cross-disciplinary Critique of Research

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Human resource development, as a young social science discipline, benefits from critical self-examination and from learning from the experiences of other, more mature social sciences. In this study, the spirit of improvement through critique is applied to HRD research. A methodology is presented for the cross-disciplinary review and critique of research in HRD and other social sciences. The methodology supports cross-disciplinary analysis of research and provides a criterion-based system for improving HRD research.

Can HRD research be improved? Could the issues selected for study and the methodological rigor of HRD research be done more effectively? Is there room for improvement in the scope, generalizability, and theoretical and practical importance of HRD research?

The obvious answer is, of course improvement is needed in research. Scholars of most other disciplines would respond similarly if the same questions were posed to them. Thus, rather than ask, "in what areas can HRD research be improved?" a more compelling question is, "are there any areas in which HRD research is not in need of improvement?"

Research in HRD shows some remarkable strengths considering that HRD is one of the youngest fields in the social sciences. However, because it is such a young field, research in HRD has not had ample opportunity to mature. Older disciplines such as biology, physics, medicine, and engineering are still hard at work generating new basic and applied knowledge in the hopes of creating safer environments, improving quality of life, promoting health, and other desirable ends. Scientific advancement occurs by moving beyond what is known and accepted, and by taking a critical approach to resolving important new issues. It requires critical self-examination.

Since older social science disciplines have faced similar challenges in developing a substantive body of knowledge as HRD, their experiences can inform the ways in which HRD can strengthen its own research. This paper provides a methodology for the review and critique of social science disciplines including HRD. The methodology provides a basis for identifying the strengths of the related research traditions and for improving research in HRD practice.
The core research questions of the study are:

- Can the strengths of the research strategies of the other social science disciplines inform the further development of research in HRD?
- What methods are needed to critique research across related social science disciplines such as economics, sociology, management, and psychology?

The paper begins with a brief critique of research in HRD. Then, a process for conducting integrative research reviews across disciplines, developed for this study, will be described. Research in the fields of economics, sociology, management, and psychology will be reviewed. The strengths of the research strategies of each of the fields reviewed will be identified. Finally, these research strengths will be applied to HRD and recommendations will be made for how HRD research might be further developed by adopting these strategies.

A Critique of HRD Research

The following critique identifies areas in which improvement is needed in HRD research based on a brief review of HRD literature.

Research Lacks a Multi-disciplinary Approach. HRD research has always been parochial, limited to the examination of ideas and methods for learning, training, and individual and group development. Relative to research in the other social sciences review in this paper, the variables studied in HRD are generally limited to issue of learning, education, and training. This

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narrow focus exists despite the complex and multi-dimensional determinants of organizational success in today's business environment.

For example, Taylor's (1992) examination of the relationship between training implementation characteristics and the success of supervisory training was limited to the perception of training directors. Research findings that have been filtered through training professionals are anything but interdisciplinary and are of limited generalizability.

Studies Are Limited to Organizational Contexts. Few studies examine human resource development in communities, industries, and other populations beyond the organization setting. Research in sociology, psychology, and economics takes a broader view of its study populations by including communities, cultures, regional, national, and even international perspectives. Why must the development of human potential as addressed by HRD be restricted to organizations? Private, Not-for-profit, community, non-profit, government, higher education

Outcome Measures Have Little Strategic Value. Few HRD studies use the organization's own measures of performance as the dependent variable. For example, Nowack's (1992) study comparing managers' self-ratings of the frequency of their behavior with the ratings of others was not tied to individual (forget organizational) performance outcomes. Kovach and Cohen's (1992) study related types of training to HR variables at the individual level (job satisfaction, pay, promotion, seniority, and projected organization tenure), but did not attempt to link training to performance outcomes. The outcomes studied by Taylor (1992) were training directors' perceptions of supervisors' reactions, learning, and behavior change resulting from supervisory training.

Although Guglielmino and Roberts (1992) found a significant positive relationship between self-directed learning readiness scores and job performance in two samples of telecommunication employees from the U.S. and Hong Kong, the implications of their findings were weakened because they relied on self-reports of job performance from respondents. Those in the best position to assess performance—customers, superiors, and co-workers—were not used to measure this variable.

Karl and Ungsrithong (1992) studied the effects of previews of training on outcome measures that were limited to self-reports by participants. Attitudes toward training, motivation to learn, and other participants' reactions to training were examined to determine the effects of training previews. To study the effects on transfer of training, subjects given different training previews were asked if they had tried to transfer the learning acquired in training. No attempt was made to ask others in positions to assess the subjects' behavior or performance change if these outcomes were achieved.

Imprecise Definitions of HRD Interventions. Research in HRD is frequently plagued by two problems with the definition of the intervention. The actual intervention is multi-dimensional (for example, including financial incentives and job skills training), and yet the intervention is considered "training." Another definitional problem is that the intervention is correctly identified as training, yet the research fails to account for the other changes in the workplace that inevitably affects performance. Most successful performance improvement efforts in organizations are a combination of related interventions. An example of imprecise definitions is Kovach and Cohen's (1992) study provided superficial definitions of three types of training. On-the-job, off-the-job, and refresher training were characterized without addressing their purposes, scope, or complexity.

Today's Research Addresses Yesterday's Problems. Witness the popularity among HRD researchers of overworked topics such as teams, self-directed learning, and the human toll of downsizing. Meanwhile, organizations have moved ahead to other issues. It is not that "yesterday's" topics are not important—each of these is worthy of study. Yet, a knowledge base has accumulated for these topics and the contribution of each new study is marginal. Why not focus on using what we know in each of these areas, rather than squeezing yet another concept out of extensively explored topics.

Nowack's (1992) study comparing managers' self-ratings of the frequency of their behavior with the ratings of others was a reexamination of yesterday's problem.
Rather than HRD researchers asking HRD practitioners about the "success" of training programs as Taylor (1992) did, HRD researchers should ask those in a better position to assess actual performance outcomes (i.e., line managers and employees) about the effectiveness of supervisory training!

The Need for Cross-disciplinary Research Review and Critique

Despite the advances in methods for conducting integrative research reviews, cross-disciplinary reviews of research are rarely reported in the literature. These reviews are important if related disciplines in the social sciences are to learn from each other. There are several reasons why such reviews are rarely reported. First, scholars generally spend their time conducting research within their own disciplines. There are enough voids in the theory and research of the social sciences to keep scholars busy within their own disciplines. Second, methods for conducting cross-disciplinary reviews have not been formalized. Only recently have the methods described above for a conducting review on a specific topic been developed. These methods have not been extended to research reviews across disciplines. Third, few truly cross-disciplinary forums for reporting such reviews exist. Most researchers have specific audiences in mind for their work and publish in specialized journals that best reach those audiences.

From Which Disciplines Can HRD Learn?

Because other fields face similar problems in advancing practice through research, the examination of the experience of other social science disciplines is helpful. Is there a particular social science with which a comparison to HRD would be most helpful? If so, with which one—psychology, education, management? Because researchers in psychology effectively use psychometrics to quantify relationships between variables of interest, much could be learned from this area to improve the precision of the definitions of variables studied in HRD. Similarly, there might be benefits to examining the research strategies of the field of management, where research is purposefully designed to study outcomes that have strategic value. Something could also be learned from the field of economics, which produces studies that apply across industries and populations on important topics such as shifts in jobs, occupations, and labor markets. Indeed, the research traditions of each of these fields—sociology, psychology, economics, and management—all have something of value to offer.

The fields of economics, sociology, management, and psychology offer HRD fertile lessons to improve research. Each has contributed significantly to the body of theory and research supporting HRD. Economics is the study of the allocation of scarce resources among competing needs (Samuelson, 1980). Human capital theory explains the potential economic benefits of human resource investments (Becker, 1964). Human capital theory is the primary basis for arguments that expenditures on education and training are justified on the basis of cost-effectiveness (Levin, 1987), utility analysis (Schmidt, Hunter and Pearlman, 1982), and cost-benefit analysis (Swanson and Gradous, 1988). Sociology included the study of social relationships and institutions, including the organizations within which HRD functions. Organizational sociology addresses issues of structure, communication, power, and influence at the level of the firm (Scott, 1994). Occupational sociology examines changing patterns of skills, roles, and work relationships within and across jobs and occupations (Attewell, 1992). Among the specialties within the field of management, organization behavior and human resource management have contributed substantially to the knowledge base of HRD.

Integrative Reviews as a Research Process

The cumulative knowledge in a field of inquiry is assessed by conducting integrative reviews of the theoretical and empirical literature. The purpose of integrative research reviews is to synthesize separate research findings into a coherent whole (Cooper, 1982). Integrative research reviews are used to verify and develop theory, assess substantive and methodological advances, synthesize knowledge, and generalize inferences from a set of relevant studies (Ellis, 1991). Thus, the inferences made in integrative research reviews are as important to the advancement of a discipline as those made in primary research (Light and Smith, 1971; Cooper and Hedges, 1994).

The integrative research review has been conceptualized as a research process in its own right that is separate from literature reviews that serve as background to new research activity. Guidelines promoting the same rigorous standards for research reviews that apply to primary research have been developed. In an early pioneering effort, Light and Smith (1971) suggested criteria for determining when data from dissimilar studies could be pooled. They proposed a method, called the "cluster approach," of combining the data of studies from which conflicting conclusions have been drawn to inform decision making in the social sciences. Taveggia (1974) observed that the findings of any single research study are probabilistic—they may have occurred simply by chance. He demonstrated that if a large enough number of studies are done on a particular topic, chance alone dictates that the studies will report inconsistent and contradictory findings. In arguing for a cumulative approach to interpreting research findings, he stated, "what appears to be contradictory may simply be the positive and negative details of a distribution of findings" (p. 398).

Jackson (1980) provided the first formal specification of the methodological tasks of the integrative research review and suggested ways in which more powerful and valid reviews might be done. Demonstrating the need for more rigor in research reviews, Jackson sampled 36 review articles and found only one that reported the indexes or retrieval systems used to locate primary studies. Cooper (1982) emphasized that research reviewers must pay the same attention to rigorous methodology that is required of those conducting primary research. He conceptualized the research review as scientific inquiry involving five stages that parallel those of primary research. Cooper described the functions, sources of variance, and potential threats to validity associated with each stage and developed a comprehensive methodology for how to conduct an integrative research review (Cooper, 1984; 1989; Cooper and Hedges, 1994).

In the early 1980's, a series of publications introduced meta-analytic methods for synthesizing research findings. Glass, McGaw, and Smith (1981) presented meta-analysis as a new application of analysis of variance and multiple regression procedures with effects sizes treated as the dependent variable. Hunter, Schmidt, and Jackson (1982) introduced meta-analytic procedures that (a) compared observed variation in study outcomes with that expected by chance and (b) corrected observed effect size estimates and their variance for known sources of bias (i.e., sampling error, unreliable measurements). Hedges and Olkin (1985) further elevated the quantitative synthesis of research to an independent specialty within the statistical sciences by summarizing a wide array of meta-analytic procedures and presenting a set of rigorous statistical proofs establishing their legitimacy.

Efforts were made to include descriptive and qualitative studies in integrative research reviews. In a work that advanced the use of research reviews to assist decision making in the social policy domain, Light and Pillemer (1984) emphasized the importance of using both qualitative and quantitative studies in research reviews. Summarizing the benefits of using both numerical and narrative information, they stated, "formal statistical analysis is often needed to identify small effects across studies that are not apparent through casual inspection. But qualitative analysis of program characteristics are necessary to explain the effect and decide whether it matters for policy" (p. 10).

Thus, methodological advances in integrative research reviews have been made. Comprehensive research reviews in a wide range of topics reflect these advances. Unlike reviews of research that focus on a discrete topic or domain within a discipline, the subject of this review is how a comparison of research strategies across disciplines can inform the development of research in HRD. The multidisciplinary scope of research addressed here is far broader than that of traditional reviews of research and requires a substantially new review methodology. Consequently, a new methodology was developed for conducting an integrative review of research across disciplines. The methodology was adapted from the work of Cooper (1989) and Ellis (1991). The six phases of this methodology are described next.

A Methodology for Cross-Disciplinary Research Reviews

The six phases of the review methodology are (a) problem formulation, (b) determining study populations, (c) selecting studies, (d) data analysis, (e) cross-disciplinary synthesis, and (f) reporting the results.

Problem Formulation. The design of a research review is based on the specification of a core problem to be resolved or a set of related hypotheses to be tested. The source of the problem to be addressed may be theory (i.e., verifying existing theories or developing new ones), the empirical research to be reviewed, prior research reviews, or a new problem to be addressed by research review rather than primary research (Jackson, 1980).

Defining key concepts and specifying the operations used to measure variables are a necessary part of stating the problem. Constructs central to the problem are first conceptually defined and then related to observable events through operational definitions. The key distinction between primary research and research reviews is in the specificity of definitions. While primary research typically involves a discrete operational definition for each concept, operational definitions serve a broader purpose when reviewing research. Operational definitions for concepts used in cross-disciplinary reviews of research must strike a balance between two opposing constraints. They must be precise enough to focus the research on studies of a particular kind, while being inclusive enough to allow selection of studies from several related disciplines.

Defining Study Populations. The major decision in data collection is determining the population of studies that will be the object of inquiry. Both primary and review researchers specify target and accessible populations for study and need to account for how these might differ from one another. Researchers conducting cross-disciplinary reviews must select the major disciplines of studies to be reviewed. Because most academic and professional disciplines have evolved into sub-specialty areas, reviewers are confronted with having to choose among many closely related specializations. Selection decisions are best justified on both theoretical and practical grounds. Reviewers of cross-disciplinary literature, especially those addressing new problems about which little has been written, must also decide whether or not to include opinion (non-scholarly) literature in the review.

Selecting Studies. Obtaining studies for review within two or more disciplines requires the development of specific criteria to be met by each study selected for the review. The operational definitions of the key concepts specified at the outset of the research provide the basis for developing these criteria. When related phenomena are being studied across disciplines, criteria are needed to indicate the features of the research (i.e., research designs, type of variables, analytical techniques) the researcher wishes to include in the review. Reviewers of research from across disciplines are confronted with the challenge of discovering authoritative sources of studies outside their own discipline.

Data Analysis. This phase of the review begins with confirmation that the studies chosen for review meet the selection criteria. Rather than a cursory review, confirmation requires the reviewer to examine each study in some detail to assure that all criteria are met. Several methods exist for analyzing data across studies. While the purpose of most reviews includes identifying patterns among studies, reviews should indicate whether these patterns are due to sampling and other methodological differences, or are truly a function of the phenomenon under investigation. Reviews of research across disciplines that seek to compare studies on a set of common criteria must specify what the criteria are, why they were chosen, and how each study will be analyzed in a reliable way against each criterion.

Cross-disciplinary Synthesis. As each study is analyzed, its findings are grouped by discipline. Within each discipline, the methods and findings of studies are compared and integrated in an effort to identify features of studies common to that discipline. Inferences made about studies from each disciplinary group are the findings of the review that, like the findings of primary research, can be applied to develop the research strategies of related disciplines.

Reporting the Results. In presenting the results of a research review, the reviewer is expected to integrate and summarize findings in a way that preserves the level of detail present in the primary research. Like primary research, research reviews should be replicable.

Table 1 summarizes the methodology for cross-disciplinary research reviews developed for this study. The right-hand column gives an example of a study in progress involving a cross-disciplinary critique of research across the disciplines of sociology, psychology, economics, management and HRD.

Table 1. Methodology for Cross-disciplinary Research Review

Research Phase	Research Task	Methods Used in this Study
1. Problem Formulation	• State research problem • Define key concepts • Define measures/operations	How can the strengths of the research strategies in other social science disciplines inform the development of research in HRD? Research study: Intervention: Organization/population outcome: Research strategy:
2. Determine Study Populations	• Specify unit(s) of analysis • Select disciplines Select specialization within disciplines • Include scholarly and non-scholarly literature	All units of analysis Human resource development Economics Sociology (organizational sociology, occupational sociology) Management (human resource management, organization behavior) Psychology (industrial/organizational psychology) Scholarly literature only
3. Select Studies	• Specify criteria for selection • Determine sources for studies • Confirm selection accuracy	Criteria for selection: A. Behavioral science interventions (usually the independent variables) must be discernible in the studies. B. Organization or population outcomes (usually the dependent variables) must be discernible in the studies. C. Some association or relationship between the interventions (A) and outcomes (B), though not necessarily a causal relationship, must be discernible in the studies. D. Exclude studies that focus exclusively on theory and theory development. The scope of the study might include theory, but should not be limited to it. E. Given the above criteria, select the best studies based on your judgment of the importance of their contributions to your discipline. (Studies can be in any form—journal articles, books, monographs, etc.) Sources for selecting studies:

		• Scholarly organizations in each discipline • Scholars in each discipline • Studies providing significant contributions to HRD Studies reviewed for the following components to confirm selection criteria were met: purpose, independent variable, dependent variable, research design, and results.
4. Data Analysis	• Develop analytical criteria • Assure reliability and validity of analysis	Criteria for analysis: • Scope: study addresses a broad range of related variables/issues • Internal Generalizability: study has wide applicability across the discipline. • External Generalizability: study has wide applicability beyond the discipline. • Practical Importance: study offers multiple recommendations for the improvement of practice. • Theoretical Importance: study makes a new, significant theoretical contribution to the field. • Analytical Strength: appropriate methods for analyzing data are used and clearly described. Reliability: Multiple raters analyzed each study against criteria. Raters were "blind" to the discipline of each study and to the ratings of others. Validity: Each criterion applies equally to all disciplines from which studies were drawn. Each criterion addresses a desirable feature of research strategy.
5. Cross-Disciplinary synthesis	• Identify and compare research strategies of each discipline	Group results of data analysis by discipline. Integrate and summarize ratings on each criterion for: • Human resource development • Economics • Sociology • Management • Psychology Compare research strengths across disciplines

6. Report results	• Discuss research findings • Make recommendations	Report strengths of research strategies of each discipline. Recommendations for the development of research in HRD are based on the application of strengths from other disciplines that are relevant to HRD.

Table 2. Synthesis Matrix for Research Critique

Discipline	**Scope**	**Internal Generalizability**	**External Generalizability**	**Practical Importance**	**Theoretical Importance**	**Analytical Strength**
Human Resource Development						
Economics						
Sociology						
Management						
Psychology						

References

Cooper, H. M. (1982). Scientific guidelines for conducting integrative research reviews. Review of Educational Research, 52(2), 291-302.

Cooper, H. M. (1984). The integrative research review: A systematic approach. Newbury Park, CA: Sage.

Cooper, H. M. (1989). Integrating research: A guide for literature reviews (2nd ed.). Newbury Park, CA: Sage.

Cooper, H. M. & Hedges, L. V. (1994). The handbook of research synthesis. New York: Russell Sage Foundation.

Ellis, M. V. (1991). Conducting and reporting integrative research reviews: Accumulating scientific knowledge. Counselor Education and Supervision, 30(3), 225-237.

Jackson, G. B. (1980). Methods for integrative reviews. Review of Educational Research, 50(3), 438-460.

Light, R. J. & Pillemer, D. B. (1984). Summing up: The science of reviewing research. Cambridge, MA: Harvard University Press.

Light, R. J. & Smith, P. V. (1971). Accumulating evidence: Procedures for resolving contradictions among research studies. Harvard Educational Review, 41(4), 429-471.

Smith, M. C. & Stullenbarger, E. (1991). A prototype for integrative review and meta-analysis of nursing research. Journal of Advanced Nursing, 16(11), 1272-1283.

Taveggia, T. C. (1974). Resolving research controversy through empirical cumulation: Toward reliable sociological knowledge. Sociological Methods and Research, 2, 395-407.

Economics of Human Resource Development -Literature Review

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Economics of HRD is rarely found in HRD scholarly work, except the areas of cost benefit analysis in HRD. Human capital theory, screening theory, efficient wage model, internal labor market, agency theory, and transaction cost economics are reviewed and the implication of each theory for HRD are presented in the hope that traditional HRD functions can be expanded to include policy and strategy formulations.

It has been more than 25 years since HRD has been coined by Nadler (1970) and defined as a field by several scholars (McLagan, 1989; Nadler, 1970, 1990; University of Minnesota, 1994) in efforts to "emerge as a profession" (Watkins, 1989). The three underpinning areas of human resource development are considered to be economics, psychology and systems theory (Passmore, 1995; Swanson, 1995). Though both psychology and systems theory are, to a large extent, embedded in the areas of human resource development, an economic approach toward HRD or an integration between economics and HRD by HRD scholars is rarely found in HRD scholarly work, except the areas of cost benefit analysis or financial forecasting in human resource development.

In order to approach human resource development from an economic viewpoint, this paper reviews the evolutionary developments of human resource development, especially, in terms of HRD definitions. Second, along with a brief overview of the tenets and components of economics, economics of HRD, such as human capital theory, screening theory, efficient wage model, internal labor market, agency theory, and transaction cost economics is reviewed. Third, implications of each theory for HRD and contributions to HRD follow. Final section ends with results and conclusion.

Research Questions

The first research question is: What are the stream or trend of HRD? Second: What are the fields of economics in which scholars of HRD may take as an economic approach?
And third, What are the implications of each economic theory for HRD?

Trend of Human Resource Development

Human resource development is a newly emerging area of developing knowledge and expertise of human resources through the means of training and development. While there are overlapping areas between human resource management and human resource development, HRD is more concerned with development perspective and HRM with maintenance aspect of HR.

For over the last two decades, there have been efforts for both scholars and practitioners to define human resource development. The definition seems necessary if HRD is to emerge as a profession, as Watkins (1989) points out. Nadler (1970) is known for coining the term HRD and defines it as "a series of organized activities conducted within a specified time and designed to produce behavioral change" (p.3). Nadler (1990) changed the definition as "Organized learning experiences in a given period of time to bring about the possibility of performance change in the

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organization" (p. 1). The great transformation of the definition of HRD by Nadler over two decades is shown by the wordings from "organized activities...to produce behavioral change" to "Organized learning experiences...to bring about the possibility of performance change in the organization".

This change reflects the change in both external environment surrounding HRD and the knowledge base (refer to Jacob, 1990 for an interdisciplinary nature of HRD) that influence HRD practice. The intense global competition and accompanying interests in and efforts of enhancing organizational productivity seem to induce the transformation of an ultimate goal of HRD from behavioral change at an individual level to performance at an organizational level. Other scholars also support this trend to a large extent. In 1983, Chalofsky and Lincoln, focusing on behavioral change in individuals and groups, define HRD as "the study of how individuals and groups in organizations change through learning" (p. 20). In 1987, a task force of ASTD (McLagan, 1989) includes both individual and organizational performance in the definition of HRD, by defining HRD as "the integrated use of training and development, career development, and organizational development to improve individual and organizational effectiveness" (p. 7). In 1989, Watkins defines HRD in more comprehensive and strategic terms by stating HRD as "the field of study and practice responsible for the fostering of a long-term, work-related learning capacity at the individual, group, and organizational level of organizations" (p. 427).

A leading school of HRD (University of Minnesota, 1994), clarifies three different levels of HRD, such as an organization, process, and individuals, the purposes of HRD, the major tools to achieve the goals, such as organization development and training and development, and the critical application areas of human resource management, career development, and quality improvement. HRD is defined as

"a process of developing and/or unleashing human expertise through organization development (OD) and personnel training and development (T & D) for the purpose of improving performance".

In this way, the focus of HRD has evolved from the micro levels, such as learning at the individual or group levels to both the micro and macro levels, such as performance improvement at individual, process and organization levels. In the evolution process in defining HRD, the major tools to achieve the HRD goals, such as training and development and organizational development have been clarified, and the critical application areas of HRD, including human resource management, career development, and quality improvement have been positioned. The evolution process is expected to continue as far as external environments pressure organizations to depend on HRD as a means of improving organizational effectiveness, and more scholars from a variety of disciplines interact with HRD.

Economics of Human Resource Development

Economics, simply speaking, is a study on scarcity of resources. If there were abundant amounts of resources such as commodities and services, nobody would care about the way resources are spent. In such a situation, everybody could use the quantity he/she prefers to use, therefore, there might be no need for competition or control for resources. What an ideal society it would be! In reality, however, because there are more needs, demands and requests for particular resources than the supply, some ways of utilizing resources are sought and recommended. In short, according to Samuelson (1980), economics is a study of the way how to utilize limited resources efficiently. Economics as a discipline has a number of subdisciplines, such as microeconomics, macroeconomics, money and banking, labor economics, public finance, international economics, and etc. Among such subfields, labor economics is considered as a subfield that is closely related with HRD.

Economics of HRD is a rather unfamiliar term to HRD practitioners and scholars. To those practitioners who work at an operational level, an interface or an integration of both HRD and economics may be more familiar. Literature review of major HRD journal (for instance, HRDQ) and the works done by HRD scholars reveal that a very few works (Gradous & Swanson, 1988; McLinden et al., 1993; Mosier, 1990) were done on the dimension of an integration of economics and HRD. Economics of HRD may go beyond this narrow category. It may deal with allocation issues of HRD funding or an impact of training and organization development on the organizational performance, as economics of education covers many issues, including income effects of education and allocation of education funds. Reflecting on the current changes in environments, such as intense international competition and a survival strategy, the economic dimension is considered to be more emphasized than ever. It is expected that an examination of economic theories will expand the scope of an integration of economics and HRD.

Human Capital Theory. The origin of economics of HRD traces back to labor economics in general sense and Becker's human capital theory in specific sense. Human capital theory is considered as the most closely related field to HRD, specifically training. Theodore Schultz (1961) in his presentation to American Economic Association appears to be the first to present scholarly research regarding the return on investment in human capital, thus providing an impetus to economists to address linkages between education, training, human development and productivity. While labor is considered as a commodity which can be sold and bought, human capital refers to knowledge, expertise and skills accumulated through education and training. The concept of human capital is considered as a more elaborated and developed one than the term of labor. Human capital is considered to enhance his or her ability to carry out tasks in the organization through embodied knowledge and skills. The term of human resource is more comprehensive than labor and human capital in that human resource may stand for personalized skills, knowledge, expertise, and experiences that have been accumulated in individuals.

Becker (1964) is usually credited as the first to identify and term "human capital theory". According to Becker, human capital is classified into both firm-specific human capital and general-purpose human capital. Milgrom and Roberts (1992) illustrate two different kinds of human capital as follows. The firm-specific human capital can be obtained through training of the idiosyncrasies of the particular firm's machinery or its accounting system, the special terminology and decision procedures used in particular firms. The general-purpose human capital can be obtained through education of how to operate a type of machine or prepare accounting statements, a familiarity with general business terminology and procedures, and general skills in sales and marketing. Human capital theory views the employees' education, skills, knowledge and expertise obtained through training as the major source of enhanced productivity to both the firm and the general economy. Therefore, investments in human capital can have significant effects on the income of the individuals and the productivity of firms.

One of the contributions of human capital theory is to explicitly recognize that the labor market deals with a long-term relationship. Investment in specific human capital, by allowing employers to invest in employees and providing employees with incentives to stay with employers, contributes to a long-term employment relationship.

Screening theory and Signaling Model. While human capital theory focuses on developing knowledge, expertise and skills accumulated through training and education required for jobs, the screening theory and job signaling help individuals seek the employment opportunities. In this way, potential job applicants' skill and knowledge may be better matched with the jobs. Phelps (1972), Arrow (1973), Spence (1973, 1974) and Thurow (1972, 1975) developed the screening or signaling theories. These models suggest that education or training can play a signaling or screening role in the job market with better-educated workers becoming employed in higher-paying positions. As a result, education has a positive association with earnings for the individual household as well as for the firm.

The signaling models of Spence (1973, 1974) and Arrow (1973) are based on three assumptions. First, employers may pay higher wages to better-educated employees even if education has no effect on productivity. Second, ability is assumed to have a positive correlation with productivity. The third assumption is that workers of higher ability can invest in education

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more cheaply than those of lower ability. There are two versions of interpretation in the screening hypothesis (Strober, 1990). The stronger version takes the view, on the one hand, that education has nothing to do with productivity and schools do nothing more than play as a filtering role. The weaker version is that the role of schooling, to some extent, plays as a screen or signal in labor markets where imperfect information exists about productivity.

Efficiency Wage Model. The essence of efficiency wage theory (Yellen, 1984) reports that employers seek employees with high wages (termed efficiency wages) in order to reduce employee turnover, replacement, and monitoring costs. That is, when employers face high turnover costs or high monitoring costs, they devise wage systems that provide incentives for employees to stay with the firm and to continue to remain productive. This theory challenges human capital theory with respect to the connections between experience and productivity and between productivity and earnings. The notion that employee earnings increase with seniority because of employers' need to provide employee incentives challenges the human capital view that earnings rise with experience (seniority) because they mirror employees' productivity increases that result from job-specific training. Also, the efficiency wage notion blurs the connections among on-the-job training, productivity and earnings proposed by human capital theory because even if on-the-job training (seniority) does increase productivity, employer incentive wage schemes may obscure the connection.

Internal Labor Market Theories. Internal labor market theories are based on Doerringer and Pierre (1971), who challenges the free market principle based on demand and supply. While external labor markets set wages based on supply and demand, internal labor markets set wages based on administrative rules, procedures and convenience. These two markets are connected through certain jobs that provide ports of entry to the internal labor market. Jobs that are not entry level are not filled from the external market but through promotion and transfer of those who are already employed by the firm. The wage rates for jobs in the internal labor market are not, therefore, directly affected by competition in the external labor market.

While management increases company loyalty and reduces turnover by providing employees with better wages under efficiency wage theory, promotion of long-service employees into high-on-the-ladders, high paying jobs is considered as an earnings carrot under internal labor market theory. Human resource or industrial managers under internal labor market are given great power because their decision making ranges from how much on-the-job training to provide and how to share the costs with employees, to which jobs are assigned to which job ladders, how wide or narrow the earnings differentials are between job ladder "rungs", how much, if any, cross-over there is among job ladders, and which jobs to redesign and which to contract out (Strober, 1990).

Agency Theory. Under agency theory, derived from the study of organizations, a major question is concerned with how organizations of self-interested individuals with conflicting goals behave within the constraint of incomplete information regarding the competitive economic markets in which the firm must operate. The assumptions underlying the agency theory are as follows: first, everybody knows the goals and objectives of all individuals. Second, uncertainty prevails, i.e., the relationship between cause and effect is not known. Third, the agent knows some events that the principal does not (Levinthal, 1988). In this model, the principals in the organization (for example, an owner) offer incentive and monitor performance of agents (for instance, managers) so that the latter work for the interests of the former.

Transaction Cost Economics. A pioneer of transaction cost economics (Hart, 1989; Williamson, 1985) examined the costs that accompany any transaction and tried to examine if the firm could lower its transaction costs by undertaking them within rather than without the firm. The transaction costs, such as thinking, planning and contracting costs are usually ignored by the neoclassical paradigm. The essence of this theory is that in some cases these costs will be lower if a transaction is carried out within a firm rather than in the market. This is because transactions are organized in such a way to economize bounded rationality while simultaneously protecting those transactions against the risks of opportunistic behavior.

Implications of Each Theory for Human Resource Development

Human capital theory focuses on training among the areas of human resource development. Many training researches focuses on transfer of training (Baldwin & Ford, 1988), training methods (Bretz & Thompsett, 1992), training evaluation design (Sackett & Mullen, 1993) and trainee motivation (Noe & Schmitt, 1986). A major contribution of human capital theory to training research would be to offer the organization with implications of the scope, method and funding sources of training by estimating the effects of training on individual productivity or income.

Screening theory or signaling model is more concerned with selection than training and development. Screening is, on the one hand, considered to be a distinct concept from HRD because selection of employees is perceived as a separate activity from training and development. Under this continuum, both selection and training and development are considered to have a separate impact on job performance. From employee perspective, screening theory helps individuals seek the employment opportunities, which may better match potential job applicants' skills and knowledge. From employers' viewpoint, screening is, on the other hand, considered as the pre-stage of human resource development because selection of best candidates is considered to be instrumental in obtaining maximal efficiency of training and development for employee's in particular jobs. In the middle lies the view that both screening and training and development complement with each other in improving organizational performance.

The firms who offer efficiency wages to their employees tend to be at least medium-sized firms. The firms characterized by a large amount of resources and capital are likely to offer higher wages and to present more opportunities for training and development in order to seek and maintain competent employees within their firms than small to medium-sized firms. Conversely, firms that do not offer efficiency wages are featured by high employee turnover and face little investment in training and development. With some exceptions, some firms may offer the valuable opportunities for training and development, by providing firm-specific training instead of efficiency wages. However, these implications need to be tested empirically.

In an organization dominated by an internal labor market, employers place a high value on developing their human resources through increased investment in training and development. However, internal labor market has nothing to do with entry-level employees. It is concerned with employees of seniority in the sense that promotion of long-service employees into high-level, high paying jobs in the hierarchy is provided to employees as an incentive designed to enhance company loyalty and to reduce turnover. Therefore, in internal labor market, a high level of in-house training and employee development structure and systems is considered as an essential part of the system than external labor market through which most entry-level employees are employed.

The main interests of agency theory lie in monitoring and controlling agents so that agents can contribute to the interests of the principals. However, there is still room to think HRD in terms of agency perspective. Let us focus on the interests of the whole organization, including profits and shareholder's gains. Training can be considered as a tool, which unleashes individual skill and expertise to improve organizational performance. The owners as principals would be more interested in and invest in firm-specific training rather than general training. This is because general training is transferable to other firms and other settings, so those employees with high human capital through general training tend to move to other organizations. Besides, agency theory might provide the HRD managers with the insights of devising incentive and compensation schemes to complement with the career development.

The implications of transaction cost economics may provide HRD managers with a guide in choosing training and development programs out of external markets or internal organizations. This is because choice between external outsourcing and internal sources to a large extent, depends on transaction costs, such as thinking, scheduling, negotiation, and enforcement costs.

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Conclusion

An economic approach toward HRD or an integration between economics and HRD by HRD scholars is rarely found in HRD scholarly work, except the areas of cost benefit analysis or financial forecasting in human resource development. However, examining the evolution of HRD, the focus of HRD has evolved from the micro levels, such as learning at the individual or group levels, to both the micro and macro levels, such as performance improvement at individual, process and organization levels. Although each theory has its own implications for HRD, practitioners and scholars equipped with economics of HRD are expected to have cost-consciousness of HRD programs and institutions, first of all. Understanding of the efficient use of resources, operation of labor market, and market mechanism might be by-product learned from economics of HRD. Efficiency wage model and agency theory might provide HRD practitioners and scholars with new perspective about employee turnover, monitoring, and an incentive system. Screening theory and internal labor market theories are expected to give practitioners new vision about selection of employees, in-house training and career development.

Contribution to Human Resource Development

An economic analysis of HRD phenomenon, essentially includes a macro level, at least at an organizational approach, so that it enables HRD practitioners to understand the competing costs and benefits to the organization and to the individuals. Second, an economic approach allows us to get beyond activities or program at the operational levels to discover strategies and policies, or long-term implications of actions, activities and programs. When HRD practitioners are trained to analyze issues for their long-term implications, they are able to develop policies and strategies that will enhance individuals' skills, knowledge, and ability as well as organizational processes and effectiveness. HRD practitioners equipped with an economic perspective will be better prepared to educate employees in the organization's views so that employees' mistrust about management will be reduced. Third, through the above channels, the scope of traditional HRD functions can be expanded to include policy and strategy formulations, which role has been largely neglected by HRD practitioners, scholars and consultants.

References

Baldwin, T. & Ford, J. (1988). Transfer of training: A review and directions for future research. Personnel Psychology, 41 (1), 63-105.

Becker, G. (1964). Human Capital. New York: Columbia University Press .

Blaug, M. (1987). The economics of education and the education of an economist. New York University press, Washington Square, New York.

Blaug, M. (1985). Where are we now in the economics of education?, Economics of Education Review, 4, 17-28.

Blaug, M. (1976). The empirical status of human capital theory: A slightly jaundiced view, Journal of Economic Literature, 16, 827-855.

Hoffman, E. P. (1993). (Ed.) Essays on the economics of education, W.E. Upjohn Institute for Employment Research, Kalamazoo, Michigan.

Johnes, G. (1993). The economics of education. London: The MacMillan Press Ltd.

Hart, O. (1989). An economist's perspective on the theory of the firm, Columbia Law Review, Vol. 89:1757.

Levinthal, D. (1988). A survey of agency models of organizations, Journal of Economic Behavior and Organization, 9, 153-185.

McLagan, P. (1989). Models of HRD practice. Alexandria, VA: ASTD Press.

Mitchell, J. B. & Mahmood A. Z. (1990). Macroeconomic Conditions and HRM-IR Practices, *Industrial Relations, A Journal of Economy and Society, 29* (2), Spring.

Milgrom, P. & John R., (1992). *Economics, organization and management*, Prentice Hall, Englewood Cliffs, New Jersey.

Passmore, D. L. (1995). *Ways of seeing: disciplinary bases for research*. Research handbook for Human Resource Development: A Scholar's Response to Practitioner Questions.

Strober, M. H. (1990). Human Capital Theory: Implications for HR Managers, *Industrial Relations, A Journal of Economy and Society, 29*, (2), Spring.

Swanson, R. A. (1995). Human resource development: Performance is the key. *Human Resource Development Quarterly, 6*, (2), Summer.

Swanson, R. A. & Gradous, D. (1988). *Forecasting financial benefits of human resource development*. San Francisco: Jossey-Bass Publishers.

Swanson, R. A. & Torraco, R. J. (1995). The strategic roles of human resource development. *Human Resource Planning, 18*, (4).

University of Minnesota HRD Faculty. (1994). Definition of human resource development. St. Paul: University of Minnesota, Human Resource Development Program.

Wachter, M. L. & Wright, R. D. (1990), The Economics of Internal Labor Markets, *Industrial Relations, A Journal of Economy and Society, 29*, (2), Spring.

Watkins, K. (1989). Business and Industry. In S. Merriam and P. Cunningham (Eds.), *Handbook of Adult and Continuing Education*. San Francisco: Jossey-Bass.

Williamson, O. (1985). *The economic institutions of capitalism: Firms, markets, relational contracting*. New York and London: The Free Press and Collier Macmillan publishers.

Yellen, J. (1984). Efficiency wage models of unemployment, *American Economic Review, 74*, (2), 200-205.

The Air Force ROTC Selection System as a Predictor of Leadership

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This study analyzed the Air Force ROTC Selection System as a predictor of leadership. Air Force ROTC utilizes a national selection system for entry into their program. For this study, 102 junior and senior cadets, at two ROTC units in Colorado, rated their own leadership characteristics. In turn, they were rated by at least two or more subordinates. This study found several predictors of leadership as determined by the Multifactor Officer Questionnaire (MOQ).

The purpose of this study was to analyze the Air Force Reserve Officer Training Corps' (AFROTC) Professional Officer Course (POC) Selection System as a predictor of leadership. AFROTC utilizes a national selection system for entry into the Professional Officer Course training program. The selection system was developed, in part, by the recruiting branch of the Air Force as well as from research in an effort to determine graduation success (Cowen, Barrett, & Wegner, 1990). However, the role of AFROTC is to develop leadership. In fact, the motto of AFROTC is "leadership begins here." The AFROTC program produces most of the leaders for the Air Force and is comparable to many other military leadership programs in attempting to develop leadership qualifications. Many organizations in business, education, and government also operate leadership development programs. It is important that leadership be effectively developed by such programs. Therefore, understanding the selection criteria for such programs and whether they are significant predictors of leadership is vital. The focus of the study was transformational, transactional, and laissez-faire leadership.

Transformational Leadership. Transformational leadership incorporates and moves beyond transactional leadership. The transformational leader stimulate followers to surpass initial performance goals and self-interests by generating commitment to designated outcomes using four characteristics--charisma, inspiration, intellectual stimulation, and individual consideration (Bass, 1985). Subordinates place considerable confidence and trust in the transformational leader. A transformational leader possessing these four characteristics can provide vision and a sense of meaning toward achieving goals. Extensive surveys of major corporations, government agencies, and military organizations showed transformational leadership contributes to overall organizational effectiveness. Subordinates claimed they put forth extra effort for such leaders (see Avolio & Bass, 1988; Bass, 1985). Such extra effort meant increased productivity, effectiveness, and efficacy. In addition, extensive research on combat officers noted that transformational leaders were seen as more charismatic and, consequently, more effective than combat officers that were not viewed accordingly (Waldman & Bass, 1986). This is especially significant to Air Force ROTC since the purpose of the organization is to develop leadership ability in preparation for armed conflict.

A transformational leader possessing charisma provides vision and a sense of meaning toward achieving goals, instills pride, and earns respect and trust from subordinates. Inspirational leadership involves the communication of high expectations, use of symbols to focus efforts, and express important purposes in simple ways. Intellectual stimulation refers to leaders who promot intelligence, rationality, and careful problem solving processes while viewing difficulties as problems to be solved not avoided. Leaders who provide individualized consideration, give personal attention to subordinates, treat people with respect, and coach, mentor, and advise followers, are considered transformational in nature. Transformational leaders tend to be proactive rather than reactive, more creative, greater risk-takers, and view problems as challenges and opportunities. In general, followers state they exert extra effort for transformational leaders (Avolio & Bass, 1988; Bass, 1985).

Transformational leadership, moreover, refers to leadership that transforms the outlook and behavior of followers by generating awareness and acceptance beyond their own self-interests toward the good of the group, and a process where leaders and followers raise one another to higher levels of motivation (Burns, 1978). Transformational leaders raise the consciousness of

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followers about the importance and value of shared goals. Reciprocally, leaders improve to a higher level of motivation. The heightened level of motivation for followers is associated with leaders who possessed characteristics of charisma, inspiration, individualized consideration to followers, and intellectual stimulation that aroused subordinates (Avolio & Bass, 1988; Bass, 1985; Hunt, 1984; Yammarino & Bass, 1990).

Transactional and Laissez-faire leadership. Transactional leaders focus primarily on the social exchange nature of leader-subordinate relationships. In other words, transactional leaders implicitly and explicitly contract with followers in exchange for rewards (Bass, 1990). The typical leader approach is transactional in nature because he or she appeals to subordinate's needs and decides their goals. For Bass (1985) and Yammarino and Bass (1990), transactional leadership is associated with four factors--contingent rewards via promises, contingent rewards via rewards, active manage-by-exception, and passive manage-by-exception. These four factors are components of transactional leadership and attempt to promote follower self-interest, routine performance, and general organizational goals either actively or passively.

More management-based in nature, transactional leaders have been seen as less effective in organizations than transformational leaders. Followers stated they exerted less effort for such practices compared to transformational leadership methods (Bass, 1985). There is a greater payoff for organizations, and subordinates in the organization, if the leadership is viewed as possessing vision, arousing confidence, and establishing commitment.

Burns (1978), after extensive work on leadership, expressed the belief that transactional and transformational leadership were bipolarties at two ends of the same continuum. Bass (1985), on the other hand, argued and demonstrated (Waldman & Bass, 1986) that transformational leadership built on transactional leadership. However, according to these authors, transactional leadership did not build on transformational. This led to the contention that transformational had a greater impact on outcomes and impact in organizations. This is important for two reasons. First, the success or failure of any organization depends on leader and follower commitment toward goal attainment. Second, the study of impact and outcomes reveals much about the leadership process (Clark, Clark, & Campbell, 1992). It tells what behaviors produce successful follower responses and what conditions moderate or accentuate such influences. Transformational leadership, therefore, is to be desired in any organization wishing to be more effective and accomplished. Transactional models center on the followers' perception and expectation about the leader's actions and motives. Transactional leadership is viewed as contingent reinforcement or, in other words, rewards provided for certain performance level achievement. In its less active form, transactional leadership is closer to management or contingent negative reinforcement.

Laissez-faire leadership is the absence of leadership. Scholars agree the absence of leadership has negative implications for goal attainment, motivation, organizational performance, as well as for other organizational and individual performance areas (Kouzes & Posner, 1987).

Research Questions

Some of the significant research questions this study addressed were:

1.Which independent variables in the ROTC Selection System predicted transformational leadership (charisma, individualized consideration, intellectual stimulation, and inspirational leadership)?

2.Which independent variables in the ROTC Selection System predicted contingent rewards transactional leadership (contingent rewards using promises and contingent rewards using rewards)?

3.Which independent variables in the ROTC Selection System predicted manage-by-exception transactional leadership (active manage-by-exception and passive manage-by-exception)?

4.Which independent variables in the Professional Officer Course Selection System predicted laissez-faire leadership?

5.Were follower evaluations and leader self-evaluations consistent predictors of contingent rewards transactional, management-by-exception transactional, and/or laissez-faire leadership?

6.Was gender a predictor in the assessment of transformational, contingent rewards transactional, management-by-exception transactional, and/or laissez-faire leadership?

7.Was ethnicity a predictor in the assessment of transformational, contingent rewards transactional, management-by-exception transactional, and/or laissez-faire leadership?

8.Was rank a predictor in the assessment of transformational, contingent rewards transactional, management-by-exception transactional, and/or laissez-faire leadership?

Methodology

The AFROTC Selection System includes cumulative grade point average, detachment commander ratings, verbal and quantitative scores from the Air Force Officer Qualifying Test (AFOQT), field training performance evaluations, and physical fitness tests. AFROTC national headquarters is responsible for the selection and training of candidates. AFROTC detachment programs, located at participating colleges and universities, utilize this selection system for entry into the POC.

Grade point average is a selection system standard. Entry into the POC requires a minimum GPA of 2.5 on course work. This average is calculated based on all college courses the candidate has taken, using a 0- to 4-point scale. A GPA of 4 is equivalent to an A average; 3 points to a B; etc. Failure to meet the minimum GPA can result in discharge from ROTC.

The AFOQT is a paper and pencil instrument with multiple choice test items designed for group administration under standardized conditions. The test contains 380 items, grouped into 16 subtests of 15 to 40 items each. The subtests are aggregated into five composites: pilot, navigator-technical, academic aptitude, verbal, and quantitative. The academic aptitude is actually the mean of both the verbal and quantitative scores. The pilot and navigator scores are a combination of verbal, quantitative, and aviation assessments. All AFOQT composite scores are reported in percentiles. A large number of pilot, navigator-technical, and academic aptitude scores overlap considerably with verbal and quantitative scores. Consequently, for this study, we only used the verbal and quantitative AFOQT scores as predictors to avoid the violation of muticollinearity (high correlation with other independent variables). High correlation between variables lessons the variance that can be accounted for in the statistical analysis. For this reason, AFOQT pilot and AFOQT navigator were eliminated as independent variables. Those two assessments share similar verbal, quantitative, and aviation questions. Moreover, AFOQT academic aptitude was a composite of AFOQT verbal and quantitative scores and would have been a redundant measure.

The detachment commander's rating is an overall rating of the acceptability of an applicant based on application information and, in some cases, a personal interview with the detachment commander. The commander usually consults with ROTC instructors who had previous contact with the candidate. Usually with other ROTC officers present, the commander uses a semistructured interview technique to ascertain the candidate's aptitude, motivation, attitude, background, and general suitability for a military officer career. The candidate is ranked by graduation date from highest (1) to lowest (number is dependent on the total graduating). For example, if there were 15 graduates, commander rankings, established by Air Force ROTC Headquarters edict, can only have a single number one ranking, a single number two ranking, and so forth until 15 is reached.

AFROTC field training (FT) is required of all cadets who are seeking membership into leadership positions. Field training is normally accomplished during the summer between the cadet's sophomore and junior years. Cadets who complete all Air Force ROTC courses attend a four or six week FT encampment depending on when they enter AFROTC. The FT encampments provided concentrated training in leadership, followership, drill and ceremonies, custom and courtesies, physical fitness training, and "officership". Field training is considered one of the more challenging experiences of ROTC. Upon completion, cadets received a training report which rates their overall performance from 0 (failure) to 4 (outstanding). In addition, they received the mean flight field training performance score for the sake of comparison. In other words, one cadet may have received a 3.0 but the flight average may have been 3.2; still another cadet may have received a 3.0 but the flight average was 2.7. Consequently, it was important that the field training scores be converted into Z-scores so they could be standardized for this study.

The Air Force ROTC physical fitness test (PFT) is comprised of five events which include pull-ups/flexed arm hang, standing long jump, sit-ups, push-ups, and 600 yard dash requiring minimum times, repetitions, or distances. All events are completed in 15 minutes or less with a minimum score of 180 for passing. The highest score possible is 500. The cadet is required to pass 4 of the 5 events in order to pass the PFT.

For this study, 102 junior and senior Air Force ROTC cadets, at two ROTC units in Colorado, rated their own transformational, transactional, and laissez-faire leadership characteristics. In turn, each were rated by two or three subordinates on those same characteristics. This allowed for a 1 to 2.2 leader-subordinate ratio for testing. A total of 22 cadets in leadership roles participating in the study were female and 19 were minority. These two groups made for worthwhile analysis of gender and ethnicity as factors in leadership assessment.

Cadets in AFROTC are categorized into two areas. Freshman and sophomores are enrolled in the General Military Course (GMC) while juniors and seniors must earn entrance into the Professional Officer Course (POC). Freshman and sophomores generally assume follower roles and take courses that cover broad aspects of the Air Force and the historical development of airpower. Junior and senior level cadets are expected to assume leadership positions and study leadership skills as well as national defense policy.

This study addressed the predictability of each type of leadership from the Selection System using multiple regression. Such statistical analysis is a valid approach toward forecasting leadership from selection system variables. In addition, we looked at the relationship ratings of followers and leaders, whether there were demographic differences related to leadership and what types of leadership were most common. The types of leadership were transformational (charismatic, inspirational, intellectual stimulation, and individualized consideration), transactional (contingent rewards via promises, contingent rewards via rewards, active manage-by-exception, passive manage-by-exception), and laissez-faire as determined by the Multifactor Officer Questionnaire (Bass & Yammarino, 1987).

The Multifactor Officer Questionnaire Forms 11R and 11S (Bass & Yammarino, 1987) is a slightly modified version of the Multifactor Leadership Questionnaire (MLQ) originally developed by Bass (1985) and later refined by Avolio and Bass (1988). In Form 11, the number of scales is increased with a resulting reduction in the number of items per scale. What makes this assessment unique is the changes are better suited for the military setting. It is, basically, the MLQ with a penchant toward military jargon. This instrument successfully indicates transactional (four areas) and transformational (four areas) leadership with a manner that fits the military setting and language. Moreover, it also assesses if no leadership (laissez-faire) takes place. Respondents completing the questionnaire indicated how frequently they observed behaviors or reacted to those in leadership positions on a five-point format ranging from "not at all" (E = 0) to "frequently, if not always" (A = 4). For each scale, items were summed and divided by the appropriate number of items, yielding a composite scale score that ranges from zero to four.

There are nine leadership scales in this instrument. Four are transformational leadership scales, four transactional, and one laissez-faire. The four transformational leadership scales, the number of items in each, and examples of the items are:

1. Charisma (6 items): "I'm ready to trust him/her to overcome any obstacle."
2. Individualized Consideration (6 items): "Gives personal attention to me when necessary."
3. Intellectual Stimulation (6 items): "Shows me how to think about problems in new ways."
4. Inspirational Leadership (6 items): "Provides vision of what lies ahead."

The four transactional leadership scales, the number of items in each, and examples of the items are:

1. Contingent Rewards Using Promises (3 items): "Talks about special commendations and promotions for good work."
2. Contingent Rewards Using Rewards (3 items): "Personally pays me a compliment when I do good work."
3. Active Management-by-Exception (4 items): "Would reprimand me if my work were below standard."

4. Passive Management-by-Exception (4 items): "Shows he/she is a firm believer in 'if it ain't broke, don't fix it'."

The one laissez-faire scale, the number of items in each, and example of the item is:

1. Laissez-faire (6 items): "However I do my job is OK with him/her."

Internal consistency reliability for this study was determined using Chronbach's alpha. This technique is versatile because it can be used with instruments made up of items that can be scored with three or more possible values. Overall, peer-evaluations had higher reliability measures (.69 to .97) than self-evaluations (.63 to .85). Nevertheless, the internal consistency reliability of the instrument ranged from adequate to strong.

Results and Conclusions

The Multifactor Officer Questionnaire Form 11R and 11S were delivered to 464 cadets. A total of 327 questionnaires out of 464 were collected as part of this study. That is, 70 percent of those asked to participate did so. From the two ROTC units, there were 116 in the Professional Officer Course (leaders) and 252 in subordinate positions. Of the 116 potential leaders, 102 completed the questionnaire for a response rate of 88 percent. A total of 348 subordinates were asked to evaluate superiors for this study. Exactly 225 cadets in subordinate positions returned peer-evaluations for a 65 percent return.

The majority of all cadets were European-American/Caucasian (83 percent) and male (74 percent). Among the participating subordinate cadets, 15 percent ($\underline{N}$ = 34) were minority and 28 percent ($\underline{N}$ = 63) were female. Among the participating cadet leaders, 18.6 percent ($\underline{N}$ = 19) were minority and 21.6 percent ($\underline{N}$ = 22) were female.

As noted in Table 1, this study revealed several predictors of leadership as measured by the Multifactor Officer Questionnaire. Charismatic leadership was predicted significantly from self-evaluations. Those rated high on field training evaluations in combination with low grade point averages rated themselves relatively charismatic. Subordinate evaluations indicated that low scores on the AFOQT verbal and high scores on the AFOQT quantitative combined with high field training ratings were significant predictors of charismatic leadership. The data also indicated that field training evaluations were predictive of self-evaluated leadership that uses individualized consideration.

Subordinate evaluation of leaders who did well on the AFOQT quantitative but relatively poorly on the AFOQT verbal were perceived as active manage-by-exception leaders (e.g., "Would reprimand me if my work were below standard"). There were two significant predictors of subordinates' evaluations of passive manage-by-exception (e.g., "Shows he/she is a firm believer in 'if it ain't broken don't fix it'")--high AFOQT verbal scores and low detachment commander ranking. In addition, those cadet leaders who scored well on the AFOQT verbal test perceived themselves as more laissez-faire.

The study also sought to determine if subordinate evaluations and self-evaluations were consistent. Cadet leaders rated themselves significantly more favorably on all positive leadership characteristics and low on negative ones compared to subordinate ratings. There were no significant correlations between self and subordinate ratings. However, leaders and subordinates were consistent in the type of leadership they said was exhibited. Both groups indicated two transformational leadership characteristics (charisma and individualized consideration) and one transactional leadership characteristic (contingent rewards using rewards) were most often applied, though they did not agree to the order. Leader self-assessments were inflated above subordinates, but both groups still had above average leadership ratings on a Likert one to five scale in those three leadership traits exhibited.

Gender, ethnicity, and rank were looked at as predictors of leadership. However, there were no significant differences in the perceived leadership style of men and women or of minorities and Caucasians by themselves or subordinates. rank of leaders (Cadet Colonel to Cadet Lieutenant) is similar in four areas to those outlined in Tables 4.5 through 4.10 with only minor changes. There are, however, two differences. The similar predictors are as follows: 1) Field training is significantly and positively associated with charisma on self-evaluations while GPA is significantly and negatively associated; 2) AFOQT verbal is significantly and negatively associated with peer evaluations of charisma while both AFOQT quantitative and field training are significantly and positively associated; 3) AFOQT verbal is significantly and positively associated with passive manage-by-exception after peer evaluations while detachment commander ranking is significantly and negatively associated; 4) AFOQT verbal is significantly and positively associated with self-evaluations of laissez-faire.

Table 1

Summary Table Showing Significant Betas for Independent Variables with the Leadership Dependent Variables

Leadership Assessment	Verbl. AFOQT	Quant. AFOQT	Cmdr. Rating	Field Trng.	GPA	Phys. Fit.
Transformation						
Charisma-self	--	--	--	.33	-.21	--
Charisma-peer	-.29	.27	--	.23	--	--
Individualized Consideration-self	--	--	--	.34	--	--
Individualized Consideration-peer	--	--	--	--	--	--
Intellectual Stimulation-self	--	--	--	--	--	--
Intellectual Stimulation-peer	--	--	--	--	--	--
Inspirational Leadership-self	--	--	--	--	--	--
Inspirational Leadership-peer	--	--	--	--	--	--
Transactional						
Contingent. Rewards, Promises-self	--	--	--	--	--	--
Contingent Rewards, Promises-peer	--	--	--	--	--	--
Contingent Rewards, Rewards-self	--	--	--	--	--	--
Contingent Rewards, Rewards-peer	--	--	--	--	--	--
Manage.-by-Exception, Active-self	--	--	--	--	--	--
Manage.-by-Exception , Active-peer	-.32	.28	--	--	--	--
Manage.-by-Exception, Passive-self	--	--	--	--	--	--
Manage.-by-Exception ,Passive-peer	.24	--	-.27	--	--	--
Nonleadership						
Laissez-faire-self	.35	--	--	--	--	--
Laissez-faire-peer	--	--	--	--	--	--

$p < .05$

How This Research Contributes to New Knowledge in HRD

No research has been published that determines if the Air Force ROTC Selection System predicts leadership. Since the purpose of ROTC is to develop future leaders, it is reasonable to analyze a selection system that may be predictive of leadership. Figures show that the price of producing an Air Force lieutenant via ROTC is about $77,000 (Grier, 1996). With an average annual enrollment similar to the current 13,813 Air Force ROTC students, the cost of producing commissioned officers over four years is considerable.

Human resource development professionals know competent leadership generates increased productivity, greater work quality, satisfaction among followers, and enhanced effort. Charisma was predicted from several variables including field training evaluations, GPA, AFOQT verbal scores, and AFOQT quantitative scores. This is of value to the field of HRD because the charismatic leader has a direct influence on improving organizational culture, motivating followers, earning respect and trust, and leading others to better performance. Koene, Pennings, and Schreuder (1992), for instance, found the charismatic style has a direct influence on improved organizational culture. Individualized consideration on self-evaluations was predicted from field training assessments. This is also important because leadership that use individualized consideration results in extra effort, effectiveness, and satisfaction. Active and passive manage-by-exception were predicted by different independent variables (see Table 1). These two types of transactional leadership are, according to Yammarino and Bass (1990), "a prescription for mediocrity or worse" (p. 152) because the leader intervenes only when necessary.

Overall, it looks like field training was the best predictor of transformational leadership, but not a very strong predictor of positive transactional leadership. Low AFOQT verbal scores were predictors of two positive leadership qualities while high verbal scores predicted two negative leadership qualities. High quantitative scores predicted both types of manage-by-exception.

Leader and subordinates do not view leadership consistently. Leaders assessed themselves higher than did subordinates on positive transformational and transactional leadership traits and lower on negative leadership traits. This suggests an inflated sense of leader accomplishment than may be realistic from a subordinates' assessment. If inaccurate self-evaluations, especially those that are inflated, are not corrected they could cause several problems. First, if a leader does not perceive weaknesses, he or she will not be aware that changes in behavior are needed. Second, those individual leaders who provide inaccurate self-ratings are found to be poorer performers than those who provide accurate ratings (Atwater & Yammarino, 1993; Bass & Yammarino, 1990). Third, reaction to feedback are influenced by self-assessments or, in other words, leaders may be less likely to seek evaluative information that is useful.

Neither gender or ethnicity were factors in leadership assessment by self or peer. Past research suggested that minorities and women are accorded differential treatment compared to their white counterparts in organizations. This differential treatment takes many forms, including the fact that minorities and women are not readily or fully accepted into existing informal social and informational networks (Fernandez, 1981; Nixon, 1985). This point is of special importance because access to and use of informal social networks are important factors that influence, not only organizational advancement but also the ability to secure needed organizational resources. This is significant to human resource development. Yet, unlike past research, this study suggests Air Force ROTC is both gender- and ethnic-neutral when it comes to observing leadership. That is, leaders nor followers rated women or minorities any differently than males or Caucasians.

In general, the Air Force Selection System is not a strong predictor of leadership. Therefore, ROTC may not be selecting the persons most likely to be good leaders. However, it does appear that subordinates think that ROTC leaders are relatively high on transformational leadership characteristics, although leaders and subordinates do not agree on, specifically, who is high on transactional leadership.

References

Atwater, L.E., & Yammarino, F.J. (1993). Personal attributes as predictors of superiors' and subordinates' perceptions of military academy leadership. Human Relations, 46 (5), 645-659.

Avolio, B.J., & Bass, B.M. (1988). Transformational leadership, charisma and beyond. In J.G. Hunt, B.R. Baliga, H.P. Dachler, & C.A. Schriesheim (Eds.), Emerging leadership vistas (pp. 29-50). Lexington, MA: Lexington Books.

Bass, B.M. (1985). Leadership and performance beyond expectations. New York: The Free Press.

Bass, B.M. (1990). Bass & Stogdill's handbook of leadership: Theory, research, & managerial applications. New York: The Free Press.

Bass, B.M., & Yammarino, F.J. (1987). Multifactor Officer Questionnaire: MOQ forms 11r and 11s. Binghamton, NY: Center for Leadership Studies, State University of New York at Binghamton.

Burns, J.M. (1978). Leadership. New York: Harper.

Clark, K.E., Clark, M.B., & Campbell, D.P. (Eds.). (1992). Impact of leadership. Greensboro, N.C.: Center for Creative Leadership.

Cowen, D.K., Barrett, L.E., & Wegner, T.G. (1990, July). Air Force Officer Training School Selection System validation (AFHRL-TR-88-54). Brooks AFB, TX: Manpower and Personnel Research Division, Air Force Human Resources Laboratory.

Fernandez, J. P. (1981). Racism and sexism in corporate life: Changing values in American business. Lexington, MA: Lexington Books.

Grier, P. (1996, January). ROTC's new way. Air Force Magazine, 18, 50.

Koene, A.S., Pennings, J.M., & Schreuder, H. (1992). Leadership, organizational culture, and organizational outcomes. In K.E. Clark, M.B. Clark, & D.P. Campbell (Eds.), Impact of leadership. (pp. 215-223).

Kouzes, J.M., & Posner, B.Z. (1987). The leadership challenge: How to get extraordinary things done in organizations. San Francisco: Jossey-Bass Publishers.

Nixon, R. (1985). Black managers in corporate America: Alienation or integration? Washington, DC: National Urban League Research Department.

Waldman, D.A., & Bass, B.M. (1986). Adding to leader and follower transactions: The augmenting effect of transformational leadership. (Working Paper No. 86-108). Binghamton, NY: State University of New York at Binghamton.

Yammarino, F.J., & Bass, B.M. (1990). Long-term forecasting of transformational leadership and its effects among Naval officers: Some preliminary findings. In K.E. Clark and M.B. Clark (Eds.), Measures of leadership. (pp. 151-169). Greensboro, N.C.: Center for Creative Leadership.

Moderators of Managerial Behavior Ratings: An Analysis From Multiple Perspectives

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Data from 223 managers, 1097 direct reports, 587 colleagues and 225 supervisors of a large U.K. communications organization collected during a developmental-based multi-rater feedback effort are used to examine potential moderators of (1) trends in managerial behavior ratings and (2) agreement among self and others' observations. Findings revealed significant effects with respect to type of rater, gender, tenure, and other variables. Implications of these results for using multi-rater feedback in organizational settings are discussed.

Since the early 1990s, multi-rater assessment methods and applications (also known as multi-source, multi-method, full-circle, 360-degree, and upward appraisal feedback) have made the transition from a seemingly new and exciting concept to a primary and often highly integrated element of an organization's developmental and/or performance management strategy (e.g., Antonioni, 1996; Church, Javitch & Burke, 1995; London & Beatty, 1993). As Hronec (1993) projected several years ago, performance measurement systems based on multiple perspectives such as these do indeed now represent the "vital signs" of our contemporary organizational experience. For example, a recent industry survey conducted by an external consulting firm (Mercer's Fax Facts..., 1996) based on responses from 201 different executives indicated that 29% percent of corporations are actively involved in and 11% are planning to use multi-rater technology for a variety of human resource development and performance management related initiatives. Other estimates are somewhere between 10% and 15% of all organizations, and the list of those currently using multi-rater methods include many of the most well known and successful companies (e.g., Church & Waclawski, 1998; Edwards & Ewen, 1996; Yammarino & Atwater, 1997). Moreover, various reviews and commentaries on both the popular and research literatures (e.g., Church & Bracken, 1997; Murphy & Cleveland, 1995; Tornow, 1993; Yammarino & Atwater, 1997) have suggested that the fascination with and deployment of multi-rater methodology has reached a critical mass among scientists and practitioners such that it should no longer be considered a "fad" but recognized instead as an important and inevitable element of individual development and appraisal systems for the future.

The popularity and utility of multi-rater systems are due in large part to the simple notion that behaviorally based information obtained from members of an manager's work team (including his or her direct reports, colleagues, and immediate or even dotted-line supervisors) in conjunction with feedback from his or her customers or clients represents a powerful and highly effective means for inducing individual behavioral change. Originally based on social psychological principles regarding change initially posited by Lewin (1958), recent conceptualizations of this process have incorporated the concept of managerial self-awareness as the means by which the change process occurs (e.g., Bracken, 1996; Church, 1994; Church & Bracken, 1997; Church & Waclawski, 1996, 1998; London & Wohlers, 1991; Yammarino & Atwater, 1993, 1997). Simply put, feedback about one's work-place behaviors, particularly when compared with self-perceptions, results in a process of enhanced self-awareness on the part of the focal individual, which in turn provides an impetus for behavioral change and development as well as future feedback-seeking behavior. Although this process has been one of the core assumptions behind a variety of OD and HRD related interventions over the years (e.g., Burke, Richley & DeAngelis, 1985; Bernardin, 1986; Daniel, 1985; Downham, Noel, & Prendergast, 1992; Nadler, 1977; Nowack, 1992; Shipper & Neck, 1990), it is only recently that the relationship between managerial self-awareness--as measured through self-others ratings congruence--and individual performance has been linked empirically across various samples of managers and in different industries (e.g., Atwater & Yammarino, 1992; Church, 1997, Furnham & Stringfield, 1994; Van Velsor, Taylor, & Leslie,

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1993). Moreover, findings from several longitudinal studies have suggested that exposure to multi-rater feedback may indeed have a significant impact on managerial behavior and self-awareness over time as well (e.g., Cheston, 1996; Hazucha, Hezlett, & Schneider, 1993; London & Wohlers, 1991).

Despite the popularity of multi-rater feedback systems in many organizations, however, a number of important and nagging issues still remain regarding both the measurement and implementation processes (e.g., Antonioni, 1996; Church & Bracken, 1997; Tornow, 1993). One of these concerns the basic assumption--derived in large part from classic measurement theory (Nunnally, 1978)--that multiple assessments from different sources (e.g., direct reports, colleagues, supervisors, clients) will result in more valid and reliable information pertaining to an individual's behavioral tendencies. Surprisingly enough, however, while ratings research has provided support for greater congruence in assessments from other sources as compared with any self vs. other comparison (e.g. Church, 1994; Church & Waclawski, 1997; Furnham & Stringfield, 1994; Harris & Schaubroeck, 1988; Nowack, 1992; Riggio & Cole, 1992; Wohlers & London, 1989), these relationships remain relatively weak overall (e.g., $r = .30$). Moreover, as many practitioners and researchers have noted (e.g., Church & Bracken, 1997; Borman, White, Pulakos, & Oppler, 1991; Judge & Ferris, 1993; Landy & Farr, 1980; Mabe & West, 1982), our understanding of the key moderators in the self and others' rating process is still sorely limited. The literature regarding gender effects on behavioral ratings and self-other congruence, for example, is fraught with contradictory sets of results. While London and Wohlers (1991) found that women achieved higher congruence in self versus others' ratings than did men ($\underline{r} = .33$, $\underline{r} = .22$) particularly on items pertaining to interpersonal managerial relationships (e.g., communication and empowerment), Vecchio (1993) reported the opposite, with men achieving higher congruence than women ($\underline{r} = .07$, $\underline{r} = .37$ for females and males). Similar sets of mixed effects have been reported with respect to organizational tenure as well (e.g., Church, 1994).

Given these inconsistencies in the research literature coupled with a relative paucity of applied research using behavioral ratings from multiple sources and the rising usage of multi-rater feedback methodologies in organizations, the purpose of the following study is to contribute to our understanding of the rating process by providing an empirical investigation of the effect of several key individual level moderators (i.e., ratings source, gender, tenure in the organization, tenure in current job, frequency of workplace interaction) on behavior rating tendencies and self-other congruence. The results of this study are intended to assist OD and HRD practitioners in the effective use and interpretation of multi-rater methods in various organizational applications.

Method

The data used in the present study were collected over a 24 month period from managers (the focal individual), their direct reports, colleagues and supervisors from a large U.K. communications organization as part of a larger 360-degree feedback-based OD and HRD leadership development initiative. All focal individuals participated in a three-day residential developmental program designed to enhance their leadership and management skills. These programs were held in an offsite management training facility. Prior to attending the program, behavioral and performance ratings were obtained from the focal individuals and their co-workers for use during the training sessions. The data were ultimately delivered to participants during the program in the form of individualized feedback reports. Professionally trained staff provided individual coaching and counseling during the week to help participants understand and make effective use of the feedback.

All raters (including the focal managers) were informed of the developmental intent of the rating process and how the feedback would be used. They were instructed to be as candid in their assessments as possible. Raters were also told that no one in the organization other than the focal manager himself or herself would receive a copy of the results of their assessments. Further, direct reports and colleagues were also notified that their ratings would not be reported to the participant unless 3 or more responses were received from the same perspective, thus insuring the confidentiality of their individual responses. These tactics were employed with the intent of enhancing rater motivation and reducing instrumentation effects inherent in the rating process

(Bracken, 1996; Church, 1995a; Church & Waclawski, 1998; Harris, 1994; McIntyre, Smith, & Hassett, 1984; Ostroff, 1993).

In total, responses were received from 223 focal managers, 1097 of their direct reports, 587 of their colleagues, and 225 of their supervisors. Among the focal managers, 68% were male and 32% female. In terms of tenure, 10% had been with the organization for less than 1 year (at the time of the data collection), 18% had a tenure of 1 to 3 years, another 19% between 4 and 7 years, 11% between 8 and 10 years, 20% between 11 and 14 years, and 22% between 15 and 19 years. With respect to years in their current assignment, 7% had been there less than 6 months, 24% between 6 months and 1 year, 45% between 1 and 3 years, 21% between 4 and 9 years, and only 8% for 10+ years. Finally, based on a 5-point scale describing the frequency of workplace interaction to the focal manager being rated (where 1 = rarely and 5 = very often), the average contact ratings were 4.27 for direct reports, 3.71 for colleagues, and 4.54 for supervisors. These data would indicate that the observers in this sample worked with the focal individuals frequently and therefore were in a strong position to assess their workplace behaviors.

Data were collected using a 26 item custom-designed behaviorally based instrument constructed in collaboration with the OD department of the client organization. The inter-item reliability of the total instrument was quite strong among the total sample with .86 for self-ratings, .95 for averaged direct reports ratings, .93 for averaged colleague ratings, and .93 for supervisor ratings.

Analyses were conducted on these data using a total score for all 26 items to look for basic ratings trends, as well as the specific item-level to look for behavioral themes. Averaged ratings by source (e.g., for direct reports and for colleagues) were used for those individuals with more than one direct report or colleague responding. Self-other congruence (often an operationalization for managerial self-awareness) was computed using two different methods: (a) the collective level of agreement between self and others' ratings using a standard index of profile similarity *d*, i.e., the square root of the sum of squared differences between self and other (averages were used for direct reports rating the same individual) for each comparison item divided by the total number of items (e.g., Church, 1997; Nunnally, 1978; Tisak & Smith, 1994); and the three-group categorical agreement method (e.g., Atwater & Yammarino, 1992; Church, 1997; Van Velsor, et al., 1993) whereby participants are classified as being either under-raters, accurate-raters, or over-raters based on a comparison of total scores. Standard Pearson correlations were also performed for comparison purposes with prior research.

Results & Discussion

Findings are described according to two major categories of moderator analysis: Behavioral Tendencies and Ratings Congruence.

Behavioral Tendencies. First, a basic overall analysis of the summary scores by rater-type revealed that, as anticipated and consistent with prior research (e.g., Church, 1994, 1997; Church & Waclawski, 1996, 1997; Harris & Schaubroeck, 1988; Mabe & West, 1982; Nowack, 1992; Van Velsor et al., 1993), self-ratings were significantly higher than those provided by direct reports or colleagues. Thus, these managers tended to rate themselves higher on average across all 26 behaviors compared with ratings received from their direct reports ($t = 5.83$, $p < .001$) or their colleagues ($t = 2.89$, $p < .01$). Interestingly enough, however, this effect was not replicated between self and supervisor ratings ($t = -1.35$, n.s.), which is somewhat divergent from prior research, particularly since the trend in mean scores here was for supervisor ratings to be slightly higher than even self-assessments. Despite this anomaly, which may reflect a cultural bias or some other type of leniency bias on the part of supervisors, correlations among self and other scores were consistently poor. In fact, there were no significant relationships between self-ratings and any others' set of assessments. As usual, however, correlations among other ratings sources were significant and in the typically reported range. Table 1 provides the detailed descriptive statistics for these summary variables.

Table 1. Descriptive Statistics for Summary Ratings

	M	*SD*	*Self*	*Direct Reports*	*Colleagues*	*Supervisors*
Self	3.79	.35	.86			
Direct Reports	3.60	.41	.09	.95		
Colleagues	3.69	.40	.11	.30*	.93	
Supervisors	3.85	.48	.02	.22*	.27*	.93

Note: * $p < .01$, reliabilities are printed on the diagonal

Next, the data were examined for differences in ratings effects by each of the remaining potential individual moderators (i.e., gender, tenure in organization, tenure in current job, degree of exposure) for trends in the total scores as well as individual item level responses.

Although there were no significant general effects across the summary scores by gender and rater type, the trend was for women managers to received slightly higher or better ratings overall ($\underline{M} = 3.57$ vs. $\underline{M} = 3.66$, for males vs. females respectively). When examined at the item level using alpha controlled ANOVA models, however, a number of interesting and meaningful differences did emerge. More specifically, women managers were consistently significantly rated by their direct reports as being more adept at the communicative and facilitative aspects of managerial behavior (e.g., providing clarity, communicating openly, ensuring participation) as well as some of the more leadership or charismatic related aspects (e.g., standing up for principles, inspiring others, taking appropriate actions regarding poor performance) compared with male managers. Peers, on the other hand, rated women managers as being more encouraging of new ideas and focused on the development needs of their direct reports, compared with male managers. Interestingly enough, there were no significant differences in supervisor or self-ratings by gender. Table 2 provides an overview of these findings for each rating group. Clearly, among the present organization, women managers were seen as being more communicative, effective and inspiring compared with their male counterparts.

Table 2. Summary of ANOVA Results for Behavioral Items by Gender

Item Description	*Direct Reports*	*Colleagues*
2. You inspire others to perform at the highest level	5.79	
4. You stand up for what you believe	21.26	
6. You take appropriate action about poor performance	5.15	
9. You encourage others to invent new ways of doing things		5.29
17. You give direct reports the opportunity to learn things and try different activities on the job		5.48
18. You provide clarity about shared team goals	3.61	6.77
21. You ensure that all team members contribute to required courses of action	4.73	
24. You communicate in an open and direct manner	7.52	
25. You hold people accountable for prior agreements on performance issues		5.09

Note: All F's listed were significant at $p < .05$ or better.

Next, similar sets of analyses were conducted to explore the relationships among the variables of organizational tenure, job tenure and degree of contact with behavioral ratings. Given the scaling nature of these variables, correlations were examined first. Although there were no overall moderating effects with respect to the tenure of the focal manager, it was interesting to note that the longer the focal manager had been in his or her current position, the lower the supervisor generally rated him or her ($\underline{r} = -.19$, $\underline{p} < .01$). With respect to frequency of contact, as perhaps might be expected from a human relations perspective, the more direct reports indicated they worked with the focal manager the higher they tended to rate him or her ($\underline{r} = .18$, $\underline{p} < .01$). While this pattern was not repeated with colleague ratings, it was present to a lesser degree among supervisor ratings as well ($r = .15$, $p < .05$).

When these data were examined further at the item level, the same general trends emerged particularly with respect to the contact variable. There were some interesting relationships worth exploring further, however, regarding organizational tenure and years in current job. More specifically, the longer managers had been with the organization or in their present job the lower they were rated by their direct reports on being innovative thinkers. This is reflected in ratings on items such as demonstrating new ways of thinking and acting ($r = -.16$, $p < .05$, $r = -.16$, $p < .05$) and constantly seeking to improve the way things are done ($r = -.17$, $p < .05$, $r = -.19$, $p < .01$). Although the pattern was similar for peer ratings, the correlations among this group were not strong enough to reach significance. Supervisor ratings, on the other hand, replicated the first set of trends as well as providing evidence of a host of other negative relationships including accomplishing high quality work within established time limits ($r = -.18$, $p < .05$, $r = -.27$, $p < .001$), contributing actively and openly to the team ($r = -.18$, $p < .05$, $r = -.21$, $p < .01$), and gathering relevant information for decision making ($r = -.16$, $p < .05$, $r = -.17$, $p < .05$). Clearly, these patterns would suggest that managers in the present sample who have been with the same organization and/or in their current jobs a long time tend be less interested in new ideas, are less interested in teamwork and focus more on other types of information (e.g., perhaps political or need based) when making decisions.

Rating Congruence. Finally, the data were examined for moderator influences of these same variables with respect to ratings congruence (a.k.a. managerial self-awareness). Surprisingly, however, no significant effects emerged when examining total score correlations using the profile similarity measure (*d*). Moreover, when these same data were examined using the three-category agreement approach (e.g., Atwater & Yammarino, 1992; Church, 1997; Van Velsor, et al., 1993) to assessing self-awareness vis-à-vis ratings congruence, the same lack of findings were apparent. In short, none of the variables included in this study had any moderating impact on the relationship between the similarity in self versus others' ratings. Although this trend is consistent with at least one prior study (e.g., Church, 1997), and does add support to the arguably inherent nature of the construct of managerial self-awareness—i.e., the ability to assess one's own behaviors and the impact those behaviors have on others—it is nonetheless disappointing to be unable to shed any additional light on the relatively large gap between self and others' assessments.

It should be noted, however, that levels of congruence among the present sample as measured by the profile similarity measure were considerably better or greater than have typically been seen in prior research (e.g., Cheston, 1996; Church, 1994, 1997; Church & Waclawski, 1996, 1997), and that when compared with either direct reports or colleague ratings, approximately 40% of these respondents would be considered as accurate or self-aware raters. Given that these profile similarity scores were quite similar to those of a high-performing rather than average manager sample across 4 different datasets (see Church, 1997), perhaps the focal individuals in the present study were simply more self-aware and/or skilled in self-assessment than is typically the case and therefore presented more of a restricted range in scores.

Summary

In general the results of this study suggest that there are a number of important moderators that can impact the behavioral rating process. Although it is unclear at this point whether or not the effects identified here will generalize to other populations, it was apparent that among this sample of 223 managers in the U.K. that rating source, gender, tenure and frequency of contact or interaction all play a significant part in understanding the types of ratings received. More specifically, while direct reports and colleagues were generally more critical when providing lower scores overall, women were seen as being more facilitative, communicative and inspirational in their managerial approach by direct reports than were men. In terms of tenure, the data indicated that those individuals who had been in their positions longer were less interested in exploring new approaches to doing work and were less team and participatively focused. Finally, as might be expected, the more people work together the better the individual items ratings tended to be, at least among assessments received by direct reports and supervisors.

If we take these findings as indicative of larger, more encompassing, trends the following cautions or recommendations would apply to the use of multi-rater feedback related applications in development and performance management settings:

1. Overall strengths and weaknesses by gender for a given population should be examined so that differential developmental plans, support processes and resources can be provided. For example, while the present feedback system was intended to develop leadership skills, the data point to very different types of follow-up interventions for men vs. women managers.
2. The common assumption that older managers may be more resistant to change is probably grounded at least in part in reality, particularly when considering the relationship between age and organizational tenure. Based on the data here, it would seem as though the longer the tenure in a current position the more likely that individual will need additional support and skill building to move beyond his or her current situation and field of vision.
3. With respect to collecting data for multi-rater feedback initiatives, it is important to assess the degree of contact with an individual. Given the positive findings bias noted here, it may be necessary to instruct individuals prior to survey administration to chose a selection of raters (e.g., direct reports and colleagues) with whom they have worked well and those with whom they have had difficulties in order to maximize the quality of their feedback. Moreover, future feedback delivery systems may want to consider providing separate feedback or weighting systems based this type of information. Besides the enhanced self-awareness process, another of the key assumptions behind multi-rater feedback is that raters will provide accurate rather than biased assessments of an individual's behavior. These data would suggest that exposure may lead to positively biased ratings which may need to be corrected.
4. People appear to differ on the skill or trait of managerial self-awareness at an individual rather than a demographic level. No significant, easily quantifiable moderators of the self-others rating gap appear to be forthcoming.

Limitations & Suggestions for Future Research

There are several limitations to this research that limit the generalizability of the results presented. First, only one organization was studied. While this specific organization does represent one of the most well respected communications organizations in the U.K., it does not necessarily reflect organizations in other types of industries or countries. Future research should focus on testing the moderating effects exhibited here across a variety of other types of institutions. It may be the case, for example, that more service oriented firms yield very different types of patterns among ratings.

Another limitation of this research is the specific nature and size of the sample studied. Although based on ratings for a large sample of individual managers attending a feedback-based development program, the trends in these data may not reflect processes operating in the entire organization system. Perhaps only the most effective managers were willing or able to participate in this program, or perhaps only those most in need of assistance with their leadership style. While the program was open for two years to anyone interested, there may have been an inherent self-selection effect involved. Again, future research with other populations is needed in order to support or refute these findings.

Finally, the results described above would be more meaningful if they could have been linked directly to hard performance measures. Prior research, for example, has linked specific managerial behaviors to net profit and customer service measures in the financial (Waclawski, 1996) and in the airline service industries (e.g., Church, 1995b), as well as with respect to managerial self-awareness (Church, 1997).

References

Antonioni, D. (1996). Designing an effective 360-degree appraisal feedback process. *Organizational Dynamics, 25*(2), 24-38.

Atwater, L. E., & Yammarino, F. J. (1992). Does self-other agreement on leadership perceptions moderate the validity of leadership and performance predictions? *Personnel Psychology, 45*, 141-164.

Bernardin, H. J. (1986). Subordinate appraisal: A valuable source of information about managers. *Human Resource Management, 25*, 421-439.

Borman, W. C., White, L. A., Pulakos, E. D., & Oppler, S. H. (1991). Models of supervisory job performance ratings. *Journal of Applied Psychology, 76*, 863-872.

Bracken, D. W. (1996). Multisource (360-degree) feedback: Surveys for individual and organizational development. In A. I. Kraut (Ed.), *Organizational surveys: Tools for assessment and change* (pp. 117-143). San Francisco: Jossey-Bass.

Burke, W. W., Richley, E. A., & DeAngelis, L. (1985). Changing leadership and planning processes at the Lewis Research Center, National Aeronautics and Space Administration. *Human Resource Management, 24*, 81-90.

Cheston, S. L. (1996). *Managerial self-awareness: A longitudinal study*. Unpublished Doctoral Dissertation, Graduate School of Arts and Sciences, Columbia University, New York, NY.

Church, A. H. (1994). Managerial self-awareness in high performing individuals in organizations. (Doctoral Dissertation, Columbia University, 1994). *Dissertation Abstracts International, 55-05B*, 2028. (University Microfilms No. AAI9427924).

Church, A. H. (1995a). Managerial behaviors and work group climate as predictors of employee outcomes. *Human Resource Development Quarterly, 6*(2), 173-205.

Church, A. H. (1995b). Linking leadership behaviors to service performance: Do managers make a difference? *Managing Service Quality, 5*(6), 26-31.

Church, A. H. (1997). Managerial self-awareness in high performing individuals in organizations. *Journal of Applied Psychology, 82*(2), 281-292.

Church, A. H., & Bracken, D. W. (1997). Advancing the state of the art of 360-degree feedback: Special issue editors' comments on the research and practice of multi-rater assessment methods. *Group & Organization Management, 22(*2), 149-161.

Church, A. H., & Javitch, M., & Burke W. W. (1995). Enhancing professional service quality: Feedback is the way to go. *Managing Service Quality, 5*(3), 29-33.

Church, A. H., & Waclawski, J. (1996). The effects of personality orientation and executive behavior on subordinate perceptions of workgroup enablement. *International Journal of Organizational Analysis, 4*, 20-51.

Church, A. H., & Waclawski, J. (1997). Leading and managing in a service organization: An examination of line vs. staff effectiveness. In R. J. Torraco (Ed.), *Academy of Human Resource Development 1997 Conference Proceedings*, 555-562, Austin, TX: AHRD

Church, A. H., & Waclawski, J. (1998). Making multirater feedback systems work. *Quality Progress*, in press.

Daniel, T. L. (1985). Managerial behaviors: Their relationship to perceived organizational climate in a high-technology company. *Group & Organization Studies, 10*, 413-428.

Downham, T. A., Noel, J. L., & Prendergast, A. E. (1992). Executive development. *Human Resources Management, 31*, 95-107.

Edwards, M. R., & Ewen, A. J. (1996). *360° feedback: The powerful new model for employee assessment & performance improvement.* New York: AMACOM.

Furnham, A., & Stringfield, P. (1994). Congruence of self and subordinate ratings of managerial practices as a correlate of supervisor evaluation. *Journal of Occupational and Organizational Psychology, 67*, 57-67.

Harris, M. M., (1994). Rater motivation in the performance appraisal context: A theoretical framework. *Journal of Management, 20*(4), 737-756.

Harris, M. M., & Schaubroeck, J. (1988). A meta-analysis of self-supervisor, self-colleague, and colleague-supervisory ratings. *Personnel Psychology, 41*, 43-62.

Hazucha, J. F., Hezlett, S. A., & Schneider, R. J. (1993). The impact of 360-degree feedback on management skills development. *Human Resource Management, 32*(2-3), 325-351.

Hronec, S. M. (1993). *Vital signs: Using quality, time, and cost performance measurements to chart your company's future*. New York, NY: AMACOM.

Judge, T. A., & Ferris, G. R. (1993). Social context of performance evaluation decisions. *Academy of Management Journal, 36*, 80-115.

Landy, F. & Farr, J. (1980). Performance rating. *Psychological Bulletin, 87*, 72-107.

Lewin, K. (1958). Group decision and social change. In E. E. Maccoby, T. M. Newcomb, and E. L. Hartley (Eds.), *Readings in Social Psychology* (pp. 197-211), New York: Holt, Rinehart, and Winston.

London, M., & Beatty, R. W. (1993). 360-degree feedback as a competitive advantage. *Human Resource Management, 32*(2&3), 353-372.

London, M., & Wohlers, A. J. (1991). Agreement between subordinate and self-ratings in upward feedback. *Personnel Psychology, 44*, 375-390.

Mabe, P. A., III, & West, S. G. (1982). Validity of self-evaluation of ability: A review and meta analysis. *Journal of Applied Psychology, 67*, 280-296.

McIntyre, R. M., Smith, D. E., & Hassett, C. E. (1984). Accuracy of performance ratings as affected by rater training and perceived purpose of rating. *Journal of Applied Psychology, 69*, 147-156.

Mercer's fax facts survey results: Multisource assessment (November 20, 1996). William M. Mercer, Inc.

Murphy, K. R., & Cleveland, J. N. (1995). *Understanding performance appraisal.* Newbury Park, CA: Sage.

Nadler, D. A. (1977). *Feedback and organization development: Using data-based methods.* Reading, MA.: Addison-Wesley.

Nowack, K. M. (1992). Self-assessment and rater-assessment as a dimension of management development. *Human Resource Development Quarterly, 3*, 141-155.

Nunnally, J. C. (1978). *Psychometric theory (2nd ed.).* New York: McGraw-Hill.

Ostroff, C. (1993). Rater perceptions, satisfaction and performance ratings. *Journal of Occupational & Organizational Psychology. 66*(4) 345-356.

Riggio, R. E., & Cole, E. J. (1992). Agreement between subordinate and superior ratings on supervisory performance and effects on self and subordinate job satisfaction. *Journal of Occupational and Organizational Psychology, 65*, 151-158.

Shipper, F., & Neck, C. P. (1990). Subordinates' observations: Feedback for management development. *Human Resource Development Quarterly, 1*, 371-385.

Tisak, J., & Smith, C. S. (1994). Defending and extending difference score methods. *Journal of Management, 20*(3), 675-682.

Tornow, W. W. (1993). Editor's note: Introduction to special issue of 360-degree feedback. *Human Resource Management, 32*(2-3), 211-219.

Van Velsor, E., Taylor, S. & Leslie, J. B. (1993). An examination of the relationships among self-perception accuracy, self-awareness, gender, and leader effectiveness. *Human Resource Management, 32*(2&3), 249-263.

Vecchio, R. P. (1993). Self- and supervisor ratings: A dyadic approach. *International Journal of Organizational Analysis, 1*, 73-83.

Waclawski, J. (1996). *Large-scale organizational change and organizational performance.* Unpublished Doctoral Dissertation, Graduate School of Arts and Sciences, Columbia University, New York, NY.

Wohlers, A. J., & London, M. (1989). Ratings of managerial characteristics: Evaluation difficulty, co-worker agreement, and self-awareness. *Personnel Psychology, 42*, 235-261.

Yammarino, F. J., & Atwater, L. E. (1993). Understanding self-perception accuracy: Implications for human resource management. *Human Resource Management, 32*(2&3), 231-247.

Yammarino, F. J., & Atwater, L. E. (1997). Do managers see themselves as others see them? Implications of self-other rating agreement for human resources management. *Organizational Dynamics, 25*(4), 35-44.

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A Case Study: Employee Perceptions of the Efficacy of 360 Degree Feedback at a Large Midwestern Utility

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The purpose of this case study was to examine the design, efficacy, and compatibility of a 360 degree feedback system with organizational objectives at the organizational, departmental, and individual levels. Interviews were conducted with management and associates alike. Findings indicate unanimous perceptions among associates that 360 supports the accomplishment of organizational objectives at all levels while perceptions among persons in management were mixed. The 360 design process is documented and discussed. Implications and recommendations stemming from this particular design are noted.

The nature of evaluation within organizations is changing. Although the concept of feedback is not new to the field of evaluation, it is now being used as a formal component in employee performance appraisals (Bohl, 1996). The process for collecting this type of feedback has several names including: upward feedback, full circle feedback, multi-rater feedback, multi-source feedback, or most popularly, 360 degree feedback. The name is acquired through the process it implies. Simply put, 360 degree feedback involves collecting feedback on an employee's performance behaviors to include the following perspectives: top-down, peer, and bottom-up. Sometimes, this process can even include collecting external customer input (Edwards & Ewen, 1996; Timmerick & Bracken, 1997).

In traditional work environments with top-down organizational structures, employee performance appraisals were delivered one-way and conducted on an annual basis (Budman & Rice, 1994; Edwards & Ewen, 1996; Hoffman, 1995). Within this top-down structure managers typically critiqued supervisors or supervisors critiqued direct reports. Often, performance appraisals were tied to employee pay and promotion and directly affected compensation (Edwards & Ewen, 1996). However, with the rise of global competition in the early 1980's, organizations transitioned to flatter and less hierarchical structures (Kanter, 1989; Senge, 1990). As a result, managerial and supervisory roles began to change within organizations as team structures and decentralization efforts replaced older, hierarchical models (Kanter, 1989; Timmreck & Bracken, 1997; Witherspoon & White, 1997).

Because of the evolution of organizational power structures, managers and supervisors lack the power they once had to extend control and influence over employees. This has rendered the traditional performance appraisal process in need of change (Bohl, 1996; Budman & Rice, 1994; Filipczak, Hequet, Lee, Picard & Stamps, 1996; Fitzgerald, 1995: Schellhardt, 1996). The importance of feedback emerged as powerful tool for shaping employee behavior as companies began to recognize its developmental value (Edwards & Ewen, 1996; Timmerick & Bracken, 1997). A recent survey of 756 companies reflects the new stance many companies are assuming in placing a greater degree of importance on 360. Bohl (1996) reported that 22% of the respondents indicated they were using some form of 360 degree feedback. This same survey reported comparisons between companies that used some form of 360 degree feedback to those who used "supervisor only" appraisals. The study found that 360 improves: employee understanding and self awareness, communication between supervisor and staff, changes in work behavior, and performance results. Overall, the companies who used 360 demonstrated higher levels of agreement about the effectiveness of 360 over the older, "supervisor only" appraisal (Bohl, 1996)

Although 360 degree feedback continues to gain in popularity within the workplace as a component in the evaluation process, a particular area of concern is its application within the context of the larger organization as related to employee development (Tornow,1997).

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Specifically, employee development systems relating 360 degree feedback to organizational goals and objectives need to be examined. The efficacy of 360 as a component of the overall employee development system as it relates to current practices and policies within organizations remains unclear (Tornow,1997). Employee development plans are effective to the degree that they are systematically linked with the overall mission, vision, and strategy of their teams, departments, business units and overall corporate structure. There is a need to better understand how 360 degree feedback fits with the larger organizational system (Tornow, 1997). The purpose of this study is to examine at an exploratory level the efficacy and linkage of 360 degree feedback (referred to throughout the remainder of this paper as Full Circle Feedback (FCF) for the purposes of discussing the specific case study) for employee developmental purposes as it relates to larger organizational goals in a large midwestern utility company. This study is important for two reasons. First, it is of interest to the utility industry. As the industry undergoes deregulation, many utility companies are seeking out means for transitioning toward a more competitive environment. This study reports employee perceptions regarding the efficacy of 360 in helping to accomplish organizational objectives. The results may be helpful to human resource development (HRD) practitioners for developing 360 programs in other utility companies. Secondly, it is apparent that there is little formal research on how 360 degree feedback is used for employee development with respect to the larger organizational goals and objectives (Tornow, 1997). Nonetheless, human resource (HR) professionals continue to use 360 degree feedback as an input to personnel decisions related to pay or promotion. For example, Bohl (1996) reported that 90% of the organizations using 360 degree feedback did so to assist in making personnel decisions. With so little known about 360 degree feedback and its increasing use, this study provides only preliminary data as to how 360 degree feedback fits into the larger organizational system of a large midwestern utility company. As a result, HRD practitioners and researchers will be better equipped to understand and further investigate how 360 feedback helps to achieve organizational goals and objectives.

Research Questions

1. What design process was used to link FCF with organizational goals?
2. How has FCF supported organizational objectives at the organization level?
3. How has FCF supported organizational objectives at the department level?
4. How has FCF supported organizational objectives at the individual level?
5. To what extent is FCF compatible with the overall goals of the organization?

Research Design

This research assumed a case study design (Cresswell, 1994) at an exploratory level. The methodology involved conducting interviews with each participant. Criteria for selection included: involvement in the FCF program for over one year and a willingness to participate in the study. Individuals who had been formally involved in the company's FCF program for over one year were then chosen. An internal coordinator from the utility company ensured that the stated criteria were fulfilled. The participants represented upper and middle management, and front line employees who had received FCF reports. Data collected from the interviews provided rich verbal descriptions containing qualitative data in the form of case study narratives and content analysis. This data indicated the ways in which 360 degree feedback has been used for career development with respect to the accomplishment of organizational objectives. This study however, was limited in several ways. First, 360 degree feedback has multiple applications and this study investigated only one application: 360 degree feedback as it is used at the individual level to provide feedback regarding employee job behaviors. Therefore, research results are limited in that they will offer insight regarding this specific application of 360 and none other. Also, because this was an exploratory case study the results are not generalizable to the organization or a larger population.

The subjects chosen for this study were employees of a large midwestern utility company who had participated in the design of the FCF process or had received FCF reports as a result of their involvement within the company's FCF program. Chosen using purposive sampling, the subjects consisted of 10 individuals who had been formally involved in the company's FCF program for over one year or had participated in the FCF design process at its inception. All ten of the subjects who were chosen participated in the data collection process. The subjects represented three different business units from three different locations across the company. Three managers, two supervisors, and five associates participated in the study.

A structured interview guide was designed to assist in collecting the data from the interviews. This guide was designed to answer seven areas of interest related to the study. The first question asked for the participant to identify the goals and needs of the organization. Question two asked the participant to identify the goals and needs of their department or team. Question three identified in what ways the 360 degree feedback program supports or facilitates the accomplishment of organizational objectives. Question four asked to what extent the full circle feedback program is compatible with organizational goals and needs. Question five identified how effective the feedback program has been in helping each individuals to develop job behaviors in accordance with organizational goals and needs. Question six identified the efficacy of the feedback program for helping individuals to help other individuals develop job behaviors in accordance with organizational goals and needs. Finally, an additional set of questions were designed to identify the FCF design process.

Initial contact with representatives of the utility company was made through the company's FCF director in person at a conference on 360 degree feedback. In late June and early July, by telephone and email, appointments were arranged with select research participants. Following selection and scheduling, each participant received notice of their selection and appointment through an internal coordinator. All participant involvement occurred on a voluntary basis. Interviews were conducted on site, face-to face or by phone at the company's corporate headquarters. During August of 1997 the interviewer took extensive short hand notes and transcribed them verbatim after each set of interviews.

Verbal descriptions gathered during the data collection efforts were entered into a word processing tabular format and coded by employee status (Borg & Gall, 1996). Emergent themes were categorized. These categories were then entered into a spreadsheet and were then analyzed for frequency.

Results

The results of this study are discussed in five major sections: (1) an analysis of the FCF design process, (2) the efficacy of FCF in supporting organizational objectives at the organizational level, (3) the efficacy of FCF in supporting organizational objectives at the departmental level, (4) the efficacy of FCF in supporting organizational objectives at the individual level, and (5) the extent to which FCF is perceived to be compatible with organizational goals and needs.

Analysis of the FCF design process. A number of methods exist for designing 360 degree feedback programs (Jones & Bearly, 1996). Importantly, the efficacy of this particular 360 degree feedback program is, in part, driven from its design. In order to better understand why or why not this particular FCF program was perceived to be effective by employees, an analysis of the design is presented along with employee perceptions. The anaylsis, presented in conjunction with employee perceptions, provides some insight as to how improve the efficacy of future designs. Six segments of the design process for this particular program were identified to include: stakeholder identification, design procedures, linkage of items to organizational needs, piloting and feedback, training, and employee development. Each of these six segments are discussed and analyzed.

Stakeholder identification. Six key stakeholders or groups of stakeholders were identified at the inception of the design process. These included the HR manager, the HR personnel director, exempt personnel, non-exempt personnel, the manager of training and development, and an outside consulting firm.

Design Procedures. A leadership survey was first developed by the training and development department. Items contained in this survey reflected practical skills associated with good leaders such as "effective team member" skills. The survey was then distributed company wide to employees across the organization. Feedback from the survey was then used to determine what employees characterized as a good "leader" within their organization. This feedback was then used to develop a classification of competencies for employees. These competencies were then translated into FCF survey items. An initial pilot program was constructed to test the final FCF instrument. Unspecified, but appropriate statistical analysis were said to be used to determine which items from the initial feedback were to be included on the final instrument.

Linking FCF design to organizational goals and needs. Two major actions were taken by the design team to link FCF design with the goals and needs of the organization. The first was seeking out employee input and inviting employee participation in the initial phases of FCF construction. Although the training and development team created a survey typical of most organizational leadership profiles, this action was important in that they sought out employee opinion as to which skills were perceived to be critical to them. Secondly, employees were asked what a future picture of the organization would look like in the year 2000. From this picture, two more categories were identified by the design team: diversity and communication.

Piloting and feedback. The FCF instrument was then piloted with an initial group of supervisors. Employees were asked how well they could rate each other on the items presented. Final item selection was then determined based upon employee feedback gathered during the pilot.

Training. The training efforts employed during implementation were substantial. First all employees were required to go through a two hour workshop on FCF. A variety of skits and role plays were used to help employees understand the difference between FCF and traditional performance appraisals. Thirteen internal trainers participated in the delivery of these workshops. Key points emphasized in the training were that FCF offered more perspectives and more data towards the description of an individual's job performance. Moreover, a sample report was presented in each training session. Trainees were taught to look for trends, agreement, and discrepancies in the reports. For feedback and review, trainees were told to select two positive items and one improvement item. These items would then be used as a basis for discussion during feedback sessions. A trainer's guide was developed to aid in FCF administration for supervisors and managers.

Developmental outcomes. Employees were given the feedback reports. Feedback sessions between employees and managers or supervisors were not required and were left as optional. No employee was required to share the contents of his/her report with anyone else. Although each employee was given the option to share feedback with an internal "coach". For those employees who shared their results, many of them used the report as a basis for an individual development plan. Development plans were based upon feedback while individual and departmental goals were used as a basis for goal setting and future development. Time and financial resources were offered by many "coaches" to demonstrate organizational commitment to employee development. The final page of the report contained a "pseudo-contract" where employees and supervisors could sign their names as part of a psychological contract between the employee and the organization.

Efficacy of FCF in accomplishing objectives at the organizational level. Responses at the organizational level were divided into two general categories. The first category identified those responses in which participants perceived that FCF *did support or facilitate* the accomplishment of organizational objectives at the organizational level. The second category identified responses in which the participants *did not perceive FCF to support or facilitate* the accomplishment of organizational objectives at the organizational level. Responses from category one are reported first.

Seven participants reported that FCF supported the accomplishment of organizational objectives at the organizational level while 3 did not. Interestingly, all 3 of the participants reporting that FCF did not support organizational objectives were in a management or supervisory position. This is not to say that all managers and supervisors felt this way. Two claimed that FCF did support the accomplishment of objectives. Significantly, no associate reported negative perceptions about FCF's capability to support organizational objectives. Instead, all five associates reported that FCF supported organizational objectives.

Five participant responses indicated FCF to be effective because it provided input from many different levels within the organization, i.e. peers, supervisors, and subordinates. Three participant responses indicated FCF to be effective at the organizational level in that it helped individuals develop within the company. An explanation was attached to this response however. These participants felt that individual employee performance dictated organizational success. And because they believed FCF to be an aid in improving overall individual effectiveness, they in turn, reasoned that the company would benefit at the organizational level to the extent the employees were developed. Other data supporting FCF at the organizational level included the perception that FCF reinforced the achievement of business results. Also, two participants reported that they viewed FCF as an integral portion of the performance management system. Responses from category two are presented next.

Three respondents, all of whom were in management or supervisory positions, reported that FCF did not support organizational objectives at the organizational level. These participants saw the empirical data included in a report as "too soft" or "meaningless". Several times these respondents broached the question "so what if I get a '7' or an '8' on my report----what does the difference mean?". For those responding in this way, they believed FCF to have minimal value for the organization because they saw no value in reporting the small differences in scores. In addition, supervisors and associates alike reported that many did not know what to do with the report once they received it. One respondent in a supervisory position reported that the peer results could not mean anything because peers are in competition with each other for promotion, so there is no point in seeking out peer input because it will be politically distorted. Finally, two supervisors reported that FCF had no meaning attached to it because there was no accountability associated with the report.

Efficacy of FCF in accomplishing objectives at the departmental level. Responses at the departmental level were divided into two general categories. The first category identified those responses in which participants perceived that FCF *did support or facilitate* the accomplishment of organizational objectives at the departmental level. The second category identified responses in which the participants *did not perceive FCF to support or facilitate* the accomplishment of organizational objectives at the departmental level. Responses from category one are reported first.

Managers, supervisors, and associates reported that FCF supported the accomplishment of organizational objectives at the departmental level. Five of the respondents claimed that FCF was supportive because it offered inputs from peers, supervisors, and subordinates. When asked why this was perceived as helpful to the organization, these respondents explained that the increased number of perspectives contributing to the report offered a better description of an individual's performance at the departmental level. In addition, three respondents indicated that because FCF helped to develop employees as individuals, the larger organization stood to benefit from any individual development. In this case, participants argued, the organization benefited at the department level from the ensuing levels of individual development. Two respondents further reported that FCF supported organizational objectives in that the reports helped participants to identify areas for improvement on an interdepartmental basis. These participants explained that interdepartmental feedback is becoming increasingly important for departments. They explained that currently departments are "held captive" in providing services and are thus forced conduct business with each other. In the future, participants indicated, this would not be the case. As a result, feedback regarding the improvement of interdepartmental services is gaining a greater significance. Finally, one respondent felt that the FCF promoted a greater level of openness throughout the organization. Responses from category two are reported in the following paragraph.

Only managers and supervisors reported that FCF does not support organizational objectives at the departmental level. Three explained that they felt the system was again, "too soft" and that the differences in scores did not mean anything and therefore could not be supportive of organizational objectives. At least two managers/supervisors reported FCF to be too general to measure anything from department to department. These participants identified FCF as not being valid because the way in which organizational objectives were achieved varied greatly from one department to another. These participants further explained that a "one size fits all" approach simply could not effectively gauge employee effectiveness across departments equally as well. Lastly, one respondent questioned FCF's ability to contribute to the organization due to suspicions of employee collusion.

Efficacy of FCF in accomplishing objectives at the individual level. Responses at the individual level were divided into two general categories. The first category identified those responses in which participants perceived that FCF *did support or facilitate* the accomplishment of organizational objectives at the individual level. The second category identified responses in which the participants *did not perceive FCF to support or facilitate* the accomplishment of organizational objectives at the individual level. Responses from category one are reported next.

Data largely supported FCF as a mechanism helping to accomplish organizational objectives at the individual level. These findings included responses from managers, supervisors, and associates. Subjects reported that FCF aided in the accomplishment of objectives for two reasons which were discussed in the preceding two sections. Five of the responses supported the first reason and three responses supported the second. These two reasons were: first, FCF offered input from a variety of perspectives, that is, supervisory, peer, and subordinate levels and second, the individual development gained through FCF in some way ultimately impacted the larger organization. Moreover, five participants believed that FCF facilitated individual career development, while three respondents indicated that the feedback helped to identify individual areas for improvement. In addition, three respondents reported that the anonymity associated with FCF helped them to voice issues which might have remained unaddressed. While other comments offered by respondents indicated that FCF was helpful in revealing unseen or "blind" areas to individuals. Also, one respondent felt that FCF demonstrated management concern in regard to employee input and opinion. Lastly, one associate offered a particularly insightful response. The respondent shared that FCF helped him to remember the skills he had learned in training. And because he was continually assessing other people on these skills, this process helped to raise his own individual levels of awareness as to how to best apply those skills within the organization. Responses for category two follow.

Only management and supervisory personnel reported that FCF did not support organizational objectives at the individual level. In general, respondents in this category reported similar responses as previously described at the group and organizational levels.

Specifically, three respondents reported that again, the system was just "too soft" and therefore was not supportive of organizational objectives. One respondent reported that the mechanism was extremely burdensome. This particular respondent had well over fifteen reports to complete within less then a one month time period. Other respondents were confused as to how to rate people. They complained that there was no standard way to fill out the report, yet the end result depended on a standard rating method. Finally, concerns regarding reprisal were voiced. One respondent was concerned that if someone did not like you they would now have the chance to screw you.

FCF's compatibility with organizational goals and needs. Employees were also asked to report on the overall compatibility of FCF in relation to organizational goals and needs. In general, 7 of the respondents reported that FCF was compatible, while 2 of the respondents reported that it was not compatible. One respondent did not answer. Managers, supervisors, and associates reported FCF to be compatible with organizational goals and needs. Only managers and supervisors reported that FCF was not compatible with organizational goals and needs. Responses reporting that FCF was compatible with the organizational goals and needs are reported first.

Four of the respondents reported that it was "very compatible in that it reflects what is important to the organization by bringing it down to each level within the organization." Three responses reported FCF's compatibility with overall organizational goals and needs but did so without any common theme. And while a majority of the responses reported favorable perceptions towards compatibility they seemed to vary in their level of support. One respondent reported that "FCF is one hundred percent compatible with the goals and needs of the organization." Another respondent suggested that it was compatible, but it could become more compatible as FCF administrators refined the process. Responses reporting that FCF was not compatible with organizational goals and needs are reported next.

Two respondents fell into this category. One reported that FCF is not compatible because no accountability is associated with it. Another respondent claimed the results simply "don't mean anything".

Discussion

This research provides preliminary data regarding the efficacy of 360 within one organization at three different levels, managerial and employee perceptions regarding the compatibility of FCF with organizational goals, and an analysis of the FCF design process within a midwestern utility. A discussion of each of these three areas is presented. Implications for HRD practitioners and researchers follow.

Linking the FCF design process to organizational goals and needs. One finding resulting from this study revealed that this design process incorporated the widespread use of employee input. This finding more than likely explains the high degree of perception regarding FCF's compatibility with organizational goals. The process sought out stakeholder input from program's inception. As a result, it is not surprising that the a majority of participants perceived FCF to be effective although some managers and supervisors reported it to be ineffective. Critical to the design, was linking FCF with organizational goals through the use of surveys and pilot studies. This information played an important role in producing a valid FCF design. A second finding resulting from this study is that FCF instruments should be customized for each individual department. Managers and supervisors frequently complained that FCF did not support organizational objectives because it was design was too general and not specific enough. In this study only one instrument was created to meet the development needs of the entire organization.

Efficacy of FCF in helping to accomplish objectives at the organizational level, departmental, and individual level. A third finding resulting from this study is that only managers and supervisors reported that FCF did not support organizational objectives at the organizational level. Similarly, this perception followed suit at the departmental and individual levels. But not all managers and supervisors shared the same perceptions. Several managers and supervisors consistently indicated that FCF did support the accomplishment of objectives at the various levels. All associates however, reported FCF to support the accomplishment of objectives at all levels within the organization. A fourth finding from this study showed that the perceived efficacy of FCF varied at each of the three organizational levels between associates and management. Although a more rigorous study of these variables needs to be undertaken before any formidable conclusions can be made, associates perceived FCF to support the accomplishment of objectives at all levels, but that FCF had it's greatest impact at the individual level. Perceptions of management were mixed however. Three respondents in management positions consistently reported that FCF did not support the accomplishment of organizational, departmental, and individual objectives, while two did. Overall, the majority of the respondents (7) reported perceptions that FCF did support the accomplishment of objectives at all three levels, thus seeming to serve its purpose as an individual development tool systematically aligned with the larger organization.

Several possibilities emerge to explain these findings. First, managers and supervisors relied heavily on the same rationale at all levels in the organization for reporting that FCF did not support the accomplishment of objectives. Common to each of the three levels was the response that the data was "too soft". Second, fears of employee collusion and reprisal were reported in two of the three categories as well. But is this so surprising? Managers and supervisors are frequently required to make personnel decisions based on performance appraisals. Though the FCF program is not connected to performance appraisal at this point in this organization, managers and supervisors could be voicing early concerns regarding FCF's capability to produce appraisals which yield data that provide meaningful deference for promotional purposes. Additionally, it must be awkward for someone who has risen to a management or supervisory position under a traditional performance appraisal system to adapt to something as threatening as 360. Moreover, it is possible that managers or supervisors feel that the "rules" for making it to the top are changing. After all, current managers and supervisors were promoted under the older appraisal systems. The changes may be difficult to accept. But even so, some managers seem to be adapting. Two of the managers and supervisors in this study seemed to embrace the FCF program, even to the point of sharing their reports with subordinates. From the researcher's perspective, these interviews seemed to be more open in their tone and flavor, whereas the interviews with managers and supervisors who reported doubts and concerns with FCF seemed to assume a more defensive posture.

FCF's compatibility with organizational goals and needs. The fifth finding resulting from this study was that the majority of respondents, 70%, found FCF to be compatible with the goals and objectives of the organization. The results show that FCF is perceived to be systematically linked with the goals of the larger organization. Though this is only one case study conducted at an exploratory level, these findings do suggest that the FCF program is vital for helping individuals develop in ways which are congruent with larger organizational goals.

Implications and Recommendations

Findings present several implications and recommendations for HRD practitioners and researchers alike. This information will be useful to consultants or persons in management considering implementing 360 programs. Researchers interested in the administration and efficacy of 360 degree feedback programs may also benefit.

Linking the FCF design process to organizational goals. This study analyzed the FCF design methodology used in one organization. Though this design was effective for this organization, it may be found to be ineffective in another. As a result, implications for practitioners may include learning a variety of 360 degree feedback design processes across a variety of organizational situations so that 360 degree feedback efficacy can be achieved in multiple and dissimilar organizational settings and structures. Recommendations for practitioners include learning a variety of 360 degree feedback design processes and then choosing the one which best fits the developmental needs of personnel and aligns most accurately with the larger organization. Additionally, practitioners should seek to customize 360 programs at the departmental level in order to better meet the needs of managers and employees alike. In this way they can successfully avoid complaints concerned with face validity issues brought on by the "one size fits all" perceptions .

Efficacy of FCF in helping to accomplish objectives at the organizational level, departmental, and individual level. Implications as determined by this study indicate that HRD practitioners need to spend more time identifying the concerns of managers and supervisors when developing 360 programs. The data indicates two different perspectives from two sets of stakeholders, that is managers/supervisors and associates. The tension resulting between the two sets of stakeholders most probably originates from the role differences between management and associates. Managers have a need to make decisions regarding pay and promotions. Ultimately, this calls for them to identify and then discriminate between levels of employee performance to provide justification for promotion or demotion. Employees however, need feedback for growth and development. Although this explanation can not entirely explain the differences in stakeholder perceptions, it does imply that HRD practitioners need to better understand the utility issues associated with different stakeholders at different levels within the organization when designing 360 programs. Recommendations for practitioners include a need to more accurately identify the needs and concerns of management when designing a 360 program. Also, greater attention needs to be given for increasing corroboration between management's need for evaluation and employee's need for feedback, growth and development.

FCF's compatibility with organizational goals and needs. Findings suggest that FCF is a tool which is compatible with helping employees develop while simultaneously achieving organizational goals and maintaining organizational alignment. As demonstrated, a majority of employees interviewed felt that FCF was compatible with the goals of the organization. As a result, implications for practitioners may include conducting 360 programs with greater frequency. While many 360 programs are conducted on an annual basis, perhaps they need to be conducted more often if greater levels of employee development are to be attained. Although this may present administrative problems for organizations, the resulting implication can not be easily dismissed for logistical reasons alone. What if a coach only talked to an athlete once each season about his/her performance because it required too much time? If feedback cycles were steeped up, perhaps greater levels of individual development could be achieved through increased dialogue regarding performance. Recommendations for practitioners include conducting 360 programs more frequently while continuing to develop 360 programs which are in touch with organizational goals and needs.

Implications for future research on 360 degree feedback may include conducting more research on this same set of research questions with a larger sample size across several organizations. At an exploratory level, preliminary data suggests that FCF is an employee developmental system which is in alignment with larger organizational goals. However, more data is needed to substantiate and confirm these findings.

References

Anonymous. (1995). Sales managers are subjected to objective ratings. Marketing News, 29, 9.

Borg, W.R., & Gall, M. D. (1989). Educational Research (Fifth ed.). White Plains, NY; Longman.

Bohl, D. (1996). Minisurvey: 360-degree appraisals yield superior results. Compensation & Benefits Review, 73, 16-19.

Budman, M. & Rice, B. (1994). The rating game. Across the Board. 35-38.

Creswell, J.W. (1994). Research design: Qualitative and quantitaive approaches. Thousand Oaks, CA: Sage Publications.

Edwards, M., Ewen, A. (1996). How to mange performance on pay with 360 degree feedback. Compensation & Benefits Review, 73, 41-46.

Edwards, M., Ewen, A. (1996). Automating 360 degree feedback.Compensation & Benefits Review, 73, 5.

Fitzgerald, W. (1995). Forget the form in performance appraisals. HR Magazine , 56, 134-136.

Hoffman, R. (1995). Ten reasons you should be using 360 degree feedback. HR Magazine, 56, 83-85.

Kanter, R. M. (1989). The new managerial work. Harvard Business Review, 85-92.

Kelly, M. (1996). See yourself and others more clearly with 360 degree feedback. Paper presented at the John Hall Conference, North Carolina State University.

McGarvey, R. S. (1993). When workers rate the boss. Training, 30, 23-26.

Schellhardt, T. (1996). It's time to evaluate your work and all involved are groaning. The Wall Street Journal, 10.

Senge, P. M. (1990). The fifth discipline: The art and science of the learning organization. New York: Doubleday-Currency.

Smither, R., Houston, J., & McIntire, S. (1996). Organization development: Strategies for changing environment. New York: Harper Collins.

Splendorio, J. (1997). Strategies for Implementing and Maintaining a Successful 360 Degree Feedback Program. Strategies for Implementing 360 Degree Feedback. International Quality & Productivity Center: Little Falls, New Jersey.

Tornow, W.W. (1997, March). Advancing the Science and Practice of 360 Degree Feedback: Have we stagnated? William D. Murphy (Chair), Panel Discussion at Center for Creative Leadership. Greensboro, N.C.

Weiler, M. (1997). Human Resource Development Process at Sara Lee Knit Products. Strategies for Implementing 360 Degree Feedback. International Quality & Productivity Center: Little Falls, New Jersey.

The Role of the *Human Resource Development Quarterly* in Shaping the HRD Profession: An Eight and One-Half Year Perspective

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The contents for issues one and two of the ninth volume of the Human Resource Development Quarterly, the Academy's (and ASTD's) refereed journal, have now been determined. During its eight and one-half years, the journal has matured in providing an outlet for scholarly presentation and debate of HRD issues as counterbalance to the popular press. It has fostered community among multi-disciplinary professionals. Authors, reviewers, and board members represent a wide range of field backgrounds, research methodologies, experience levels, and foci. Acceptance rate continues to run at about 30%. Suggestions are made to enhance the possibility of potential authors having their manuscripts accepted.

Every academic field is marked by its literature. The more mature the field, the more developed are the scope and quality of the literature available to its members. Throughout its relatively young life, the field of human resource development, and its component fields of organization development, personnel training, and career development, have been well served with quality, practitioner-oriented journals and newsletters. The same, however, cannot be said of the scholarly or academic literature available to members of the profession though this situation, fortunately, is changing, in large part through the contributions of the *Human Resource Development Quarterly* during its nearly nine years of existence. While the field of human resource development, perhaps more than most fields, has been susceptible to the whims and fancies of fads as they come and go -- from programmed instruction to accelerated learning, re-engineering, adventure learning, right- and left-brain theories, Myers-Briggs Temperament Indicator, learning organizations, chaos theory, cultural assimilators, 360-degree feedback, mind maps, appreciative inquiry, large group strategic planning, and the endless list that confronts us at every conference and in each new "best-seller" in the field -- HRD is beginning to mature, as marked by some of the journals represented at this conference. Further, new journals are emerging, such as the other journal owned in part by the Academy, the *Human Resource Development International*, which fill another important role of providing a bridge between scholarly inquiry and practice. There is an important role to be filled by journals in all three areas.

The *Human Resource Development Quarterly* (*HRDQ*) has played an important role in this field's maturing process. In the beginning, there was a long gestation period before the *HRDQ* was birthed by the Research Committee of the American Society of Training and Development and with Jossey-Bass as its publisher. Beginning with the eighth volume, the Academy of Human Resource Development joined ASTD as co-owners of the journal.

From my perspective of four years as associate editor and now as editor, it is exciting to see these new partnerships emerging. The maturing process of the journal and of the field are obvious from this eight-year perspective. The Academy of Human Resource Development, from its inception, has distributed the *HRDQ* to all of its members. This will, of course, continue in the new ownership agreement. The American Society of Training and Development has made the *HRDQ* one of three options provided to all members at no additional cost beyond membership, and we anticipate even more subscriptions through ASTD's reduced subscriptions to those not selecting that option. Subscriptions have climbed to about 12,500, and the projection is for about 14,000 by year end. The quality of journal articles continues to be high. The manuscript flow is good, leaving the journal in a position of having manuscripts allocated a couple of issues out. The inception of the Richard A.

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Swanson Award for Outstanding *HRDQ* Article has recognized outstanding scholarship presented in the journal. Respected scholars are members of the journal's Editorial Board. Many highly respected and emerging scholars provide an exceptionally comprehensive review process, and the Associate Editor vacancy attracted outstanding candidates. All of these are signs of the maturity that the journal has achieved over its eight-year life.

Purpose

In the first issue, Swanson (1990) described a vision for the role that the *HRDQ* could play:

> Many of us see *HRDQ* as the start of a community of HRD scholars. I believe this research quarterly will provide the intellectual footing and research credibility HRD requires to mature as a field of study and practice. (p. 2)

Swanson went on to describe the eclectic nature of the HRD field, coming as it does from such diverse backgrounds. The hope of the early champions was that the *HRDQ* would serve as a venue for a wide range of backgrounds of authors committed to HRD, whose publications previously appeared in the foundational areas of their expertise but were then not widely available to others in the HRD field. Experience has borne this out. Authors have come from adult education, vocational education, mineral engineering management, public administration, management, political science, labor education, industrial relations, and many more. Practitioners and consultants, in addition to academics, are also authors.

Another form of inclusiveness to which *HRDQ* has been committed has been to provide outlets for both quantitative and qualitative research (as imperfect as these descriptors might be) and to integrate the philosophies of human development and human capital.

Format Used to Meet Purpose

From the beginning, the format of the journal has remained the same:

- a feature article, usually refereed, with one or two invited responses, and, sometimes, a response from the feature article author
- refereed articles, usually two to three per issue
- forum section, which includes scholarly non-refereed articles that are designed to explore controversial concepts within the field, challenge existing theory, suggest research hypotheses that have not yet been tested, respond to articles published earlier, and so on; again, usually two to three per issue
- media reviews, including materials that might not fall obviously into human resource development, such as research, economics, and future studies, for example; again, generally two to three per issue

It is not always easy to stay with this format. Getting the right mix of manuscripts in time to assemble an issue requires coordination, hard work, and just plain luck! The most difficult task has been identifying a feature article in sufficient time to identify invited reaction authors.

Success in Meeting Purpose

How successful have we been in meeting these specific diversity objectives? With the number of manuscripts received exceeding 450, we continue to receive a wide range of recommendations (from four or five reviewers) on every manuscript, reflecting, I think, the diversity of reviewers available to us. One of our ongoing struggles as editors is to determine our roles vis-a-vis the role of the reviewers in determining which manuscripts to pursue for publication. Another interesting phenomenon, from my perspective, is the difficulty in finding manuscripts for the forum section as compared with the refereed section. Finding a "Feature" article is an even more difficult task.

I believe that we have filled at least a small role in providing opportunities for fields within HRD to talk with one another, and this has created synergy within the field. Yet, just as the Academy continues to struggle to answer the dilemma of what some perceive to be a dichotomy between theory (research) and practice, so, too, do we struggle in the *HRDQ* to find adequate ways to reflect research and practice interests.

With other fine journals around, and others emerging, we have been pleased to see that we continue to receive an adequate flow of manuscripts, and, while obtaining the quality desired has not been as easy, we have succeeded in maintaining a high quality. Through eight and one-half volumes (34 issues), we have not had to compromise on quality, and we have met our page length goals and have submitted manuscript to the publisher (close to) on time.

It will be very interesting to see what happens to the new subscriptions that have emerged from ASTD's new program. Many of these subscribers are (and will be) practitioners rather than academic scholars. Our traditional subscribers have been academics, with others being libraries, corporations, and academic departments. How well does the *HRDQ* speak to practitioners? How interested are practitioners in reading about theoretical underpinnings for practice? This will be a major measure in the future of how well the field of HRD is continuing to mature.

Another objective that has never been stated explicitly, but has clearly been met, has been to provide an outlet for advanced graduate students' work. While media (books, software, video) reviews have been primary outlets, even including instructor assignments from which one or two might be of sufficient quality for publication, advanced graduate student authors have made significant contributions to the forum and even the refereed sections of the journal. We have also reached an agreement with the Donald Bullock Outstanding Dissertation Award Committee of ASTD (which last year was jointly offered by AHRD and, in the future, will become solely the responsibility of the Academy) to publish an article based on the winning dissertation each year.

Another area of diversity in which we have interest is supporting and encouraging a wide range of research methodologies, including both quantitative and qualitative approaches. In spite of that desire, however, a 1995 customer survey conducted by Jossey-Bass to determine reactions of subscribers to the journal found that, while there were very few concerns about the journal, and that there was widespread agreement that the scholarly level of the journal was appropriate, there was a feeling that there were too many quantitative articles. This feedback is interesting given that of the 13 refereed articles in volume six, eight were positivistic (descriptive, experimental, relational, quasi-experimental), while five were qualitative (one each of interpretive, case study, historical, grounded theory, and review of literature). Of the ten forum articles, one was positivistic, four were reviews of literature, and five were opinion or "thought" pieces. So perhaps in the refereed section, there was some validity to the observation. For volume seven, the results are markedly different from the previous year. Of the 12 refereed articles published, only three were positivistic. The remainder reflected qualitative case studies (2), reviews of the literature (3), theory development (2), observer-participant, and critical incident. As in the previous year, the forum articles continued to reflect a strong bias toward "opinion" pieces: seven of the nine fit this category, with one each of positivistic and theory development. A similar trend is predicted towards qualitative refereed articles for volume eight, although not all issues were available at the time this article was written. The question is, what "should" the "proper" balance be? Is it half and half? Our editorial approach has been to encourage every type of research and to hold each to standards of quality appropriate for the type of research methodology used. The change from 1995 to 1996 is not necessarily a reflection of changes in editorial policy. Rather, it is a reflection of changes in the manuscripts submitted. Perhaps the perception has now developed to affirm qualitative or non-positivistic research methodologies.

How Can HRD Professionals Become Involved with the *HRDQ*?

In addition to being consumers, HRD professionals can participate in the life of the *HRDQ* in many ways:

1☐ ***As an author in the refereed section*** These 20-25 page manuscripts need to meet the rigor of criteria applied to research and are reviewed by a panel of five.

2□ ***As an author in the forum section*** These manuscripts–thought pieces, pilot studies, reactions to previously published articles, and so on, are generally much shorter than those in the refereed section and are reviewed by the editor for acceptance.

3□ ***As a media reviewer*** Each issue contains a review of books, software, videotapes, and other media. Material for review is provided if desired. The publication date must be within a year of being current. These manuscripts are reviewed by the associate editor for acceptance.

4□ ***As a referee/reviewer*** We are always in need of reviewers for submitted refereed manuscripts. We want scholars who are themselves published in refereed journals who are willing to make the professional contribution of a significant amount of time to produce quality reviews. We are especially in need of people with skills in various qualitative areas of research, and, at the moment, we need people with some background in the broad field of human resource management.

5□ ***As an editorial board member*** Each year, we replace two to three board members for a three-year term. The commitment required is to attend the annual board meeting, associated with the AHRD annual conference, and to participate actively in supporting the journal during the year.

6□ ***As associate editor and editor*** Every four years, a new associate editor is selected. Thus, the total commitment is for eight years: four as associate editor and four as editor. This person will normally come from the editorial board or, at minimum, the pool of referees/reviewers.

7□ ***As a booster*** Does your library subscribe to the *HRDQ*? Does your company (or a company you know) support the *HRDQ* as a contributor or supporter? Both of these processes are critical to the ongoing survival and success of the journal.

Participation in any one of these roles will forward the agenda of human resource development, as well as provide a platform for the participant's own personal growth and development. The editorial staff is very willing to work with anyone in any of these roles to improve the possibilities of success in completing the desired task.

How Can Authors Increase the Possibility of Publication?

Every manuscript has its own idiosyncrasies. Having said that, however, there are definitely things authors can do to improve the odds of having their manuscript selected. Based on my review of over 450 manuscripts submitted to the *Human Resource Development Quarterly*, here are suggestions for handling the most frequently occurring problems faced by authors. Some are easily remedied; others are more difficult.

1□ Use the format specified by the journal, no matter how inappropriate you believe them to be or however unfamiliar you may be with the style. *HRDQ* requires the use of the fourth edition of the *Publication Manual of the American Psychological Association* (American Psychological Association, 1994). It has been quite amazing to me how many authors totally ignore this requirement. When manuscripts are returned to be put into this format, the revisions often come back incorrectly using the specified style. It is difficult to believe that authors actually think that editors will do this for them.

2□ Have your article edited by someone with excellent writing skills, even if you have to pay for it. Often, we receive reviews back from reviewers with negative recommendations for publication, yet the comments made hardly address content. The writing is often so poor that reviewers are not able to see past the poor writing. This is especially important for authors for whom English is not their primary language. While the journal is committed to being an international journal, the language of the journal is English. An appropriately written manuscript in the language of publication is important for success with reviewers and the editors.

3□ Review guidelines before submitting the article. How many copies are required? (We require six.) Who are the copies to be sent to? (We want them sent to the editor.)

What is required to insure a "blind" review? (We request a separate title page that can be removed prior to blind review, and all references to "my work" or any other internal references that would provide clues of authorship must be removed.) Failure to follow these guidelines can add immeasurably to the time required for the review process.

4☐ Make the relevance to HRD clear and explicit. Our experience is that we receive many manuscripts that are implicitly appropriate for publication in the *HRDQ*, but the authors leave it up to the reviewers, and ultimately the readers, to make the connection. We want such connections to be explicit.

5☐ Describe methodology completely. Readers should not be left guessing about what was done or why it was done. This section doesn't have to be lengthy, it just has to be complete.

6☐ Avoid the formalities of a dissertation. Over the years, traditions have developed about the format and structure of a dissertation. Because most graduate students do not get the experience of writing for publication, their own model for writing continues to be the dissertation. Such structure is not appropriate for a published article. Potential authors are, hopefully, subjected to reading lots of journal articles. These should be examined prior to writing for publication. As just one example, hardly ever are hypotheses listed in a journal article as they often are in dissertations. Rather, research questions are posed.

7☐ Be internally consistent with the methodology of your study. If your methods section indicates that certain steps were followed, the reader should legitimately expect that the findings would reflect these steps. If a qualitative study is described, then one should expect to see this methodology carried out throughout the article.

8☐ If your study is positivistic, and you are wanting to generalize your findings, be sure that the population is defined, your sampling is described, and your sample is adequate. Response rate also has to be adequate, or the burden of the argument is on you to make the case for its acceptability.

9☐ In positivistic studies, you must provide reliability and validity data. These are not optional requirements; they are essential in supporting the appropriateness of the findings presented.

10☐If your manuscript includes statistical analyses, provide a computer disk of your raw data. All of our statistical manuscripts are reviewed by a statistical reviewer. If a computer disk is available, assumptions behind the statistical tests can be checked and alternatives explored. If the disk is not available, long, complex letters may be required, and both parties may be left discontented with the results.

A qualitative study is not an excuse for a lack of rigor. In some ways, there is still a struggle going on about what criteria to use in evaluating a study that does not use traditional positivistic approaches. Our experience with reviewers, however, is that there is a belief that qualitative articles do not generally meet quality standards--not because qualitative articles are less acceptable for publication (they aren't), but because the same rigor is often not applied. Respond to the editors' feedback quickly. We make detailed recommendations to every author on ways in which the article can be improved. It then becomes the author's responsibility to respond to those suggestions, either by incorporating the changes into the manuscript or by telling the editors why those suggestions are not appropriate and why they have not been incorporated into the manuscript. Getting the revisions back to the editors quickly can also enhance the probability of publication. In any case, it will definitely be given faster consideration.

Where Do We Go from Here?

The journal now moves to a new era, with a new editor and a new associate editor. Further, the *Human Resource Development Quarterly* will need to be clear about its purpose and role within the profession, as new journals in the field continue to emerge, as the field itself continues to mature. The profession and its professionals need to continue to take responsibility for its journals as all of our journals play an important role in shaping the HRD community.

References

American Psychological Association. (1994). *Publication manual of the American Psychological Association* (4th Ed.). Washington, DC: American Psychological Association.

Swanson, R. A. (1990). Experience: A questionable teacher. *Human Resource Development Quarterly, 1*(1), 1-4.

Publishing HRD Research and Theory in *Adult Education Quarterly*

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This article provides an overview of Adult Education Quarterly (AEQ), including a discussion of guidelines for preparing and submitting a manuscript for publication, the process used to review manuscripts, and reflections on the future of research and publications in our respective fields.

The purpose of this article is to familiarize HRD researchers with *Adult Education Quarterly (AEQ)* as a potential outlet for publication of their scholarly articles. We will discuss the scope of AEQ, kinds of articles that are published in this journal, how it relates to the field of HRD and other journals in adult education, its editorial policies and guidelines, and how its current editors view the future of research within the fields of HRD and adult education. The view that are expressed in this article reflect those of the current editors and not necessarily the field as a whole or AEQ's sponsoring agency.

Background of the Journal

The journal was originally founded in 1929 as *The Journal of Adult Education* but the name was changed in 1983 to *Adult Education Quarterly (AEQ)*. In its more formative years, the journal sported many opinion and descriptive pieces, the thoughts of leading adult educators, musings on the growth and direction of the nascent discipline called "adult education", and the first glimmerings of theory and research. Over the years, various comparative surveys of the journal have noted the trends and themes of most interest to authors and researchers. The journal has increasingly emphasized research and theory within the field of adult and continuing education. Currently, this emphasis represents the primary focus of *AEQ*.

AEQ, represents one of a number of publications throughout the world that are devoted to the issues related to adult learning. The journal enjoys the reputation of being the premier North American research journal representing the field of adult education, and is one of only a handful of journals in the wold dedicated to research and theory in adult and continuing education. Journals such as *Convergence*, the *International Journal of Lifelong Education*, and *Studies in Continuing Education* represent the international reach of research and theory in the field. *AEQ* is also a frequent outlet for adult education scholars across the globe. The continuing learning of adults is, however, also of concern to the professions. It is not uncommon to find related journals, such as the *Journal of Nursing Continuing Education*, addressing the subject of adult learning. Other journals, such as *Adult Learning*, deal more directly with and attempt to specifically address practitioner concerns. Scholars within the field of HRD who are concerned with matters of theory and research impacting the adult as learner can find publishing outlets in many educationally-based journals here in the United States, Canada and abroad. Insofar as the field of adult education can be judged to include issues around training and settings which include business and industry, AEQ has over the years reflected in its pages theory and research of an HRD nature.

Editorial Policy

Adult Education Quarterly (AEQ), is committed to the dissemination of knowledge derived from disciplined inquiry in the field of adult and continuing education. With a circulation of about 5000, *AEQ* is published January, April, July, and October, under the sponsorship of the American Association for Adult and Continuing Education (AAACE). *AEQ* publishes articles representing a broad range of

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methodological approaches, including: a) empirical studies which use critical, action, participatory, experimental, quasi-experimental, correlational, descriptive, historical, philosophical, qualitative, or interpretive methods; b) theory-building articles; c) interpretive reviews of the literature (position statements or reasoned critiques of articles previously printed in *Adult Education Quarterly*); d) essay reviews (commissioned by editors); and e) book reviews. We have continued having a forum section, which is designed to publish shorter position papers related to the field. As of the Spring, 1996 issue we initiated a "Letters and Opinion" section in the Journal. This section provides readers with an opportunity to express particular views and responses they may have to articles published in *AEQ*.

For featured manuscripts and Forum articles, three broad criteria are used in the review and selection process. First, articles must be important in that they significantly advance knowledge and theory. Second, all material must be accurate and technically sound. Finally, articles must be well crafted; that is, they must be clear and well organized. In preparing a manuscript for submission, authors are encouraged to consider the following strategies:

1) Study the Editorial Policy and its sections on guidelines to insure that your manuscript falls within the scope of the journal and will meet stylistic requirements

2) Consider the Review Criteria (Section E of the Editorial Policy) in developing and crafting your manuscript.

3) Study back issues of *AEQ* and its predecessor, *Adult Education*, focusing especially on articles of purpose and form similar to your manuscript.

4) Ask at least two colleagues who are objective and honest in their appraisals to critically review the manuscript before submitting it to *AEQ*.

Manuscripts submitted to *Adult Education Quarterly* must be grammatically correct and stylistically consistent. The journal uses the *Publication Manual of the American Psychological Association* (APA), Fourth Edition. Potential authors should consult this publication for rules governing references and citations as well as other elements of grammar and style. All manuscripts need to be typed, double-spaced and the author(s) need to submit four copies, retaining a copy for their own files. The editors are not responsible for returning copies to authors. Articles generally should not exceed 5000 words, including charts, tables and bibliography. Potential authors are strongly encouraged to obtain and follow Editorial Policy Guidelines for specific information on technical requirements for manuscript preparation.

Manuscript Review Procedures All manuscripts submitted for consideration for publication in *AEQ* are subjected to a systematic review process. The manuscript is first examined to determine if it conforms to the editorial guidelines for the journal (i.e. if it is "in scope"). Manuscripts considered to be "out of scope" are returned to the author(s) with a brief cover letter explaining that they are not acceptable for publication by *AEQ* in their present form and no further review of the manuscript is conducted. Manuscripts determined to be "in scope", as defined in the "guidelines for contributors" (see attachment), are submitted for further review to a panel of consulting editors (CE). Typically, three individuals from this panel are selected to review each manuscript, based on background expertise and knowledge. Decisions as to who will be asked to review the manuscript are made on the basis of the nature of the research question or topic of the manuscript, the nature of the methodology employed, and the availability of CEs. The review process is "double blind," meaning the CEs do not know the identity of the author(s) and the author(s) do not know the identities of the reviewers. CEs are requested to return their reviews within five weeks of the date in which it is sent out. CEs who have not returned their reviews with this time are contacted and requested to complete their reviews as soon as possible. In the event that a particular CE cannot complete the review within this time frame, another CE may be selected for the manuscript in question.

After all reviews have been returned to *AEQ*, they are examined by the editors and final determinations of a) Accept, b) Conditionally Accept, c) Reject and Encourage resubmission, or d) Reject are made, based on the information provided by the CEs. Final decisions on each manuscript are made by the editors of *AEQ*. Letters are then prepared informing the author(s) of the editors' decision. For manuscripts falling into categories (c) or (d), *AEQ* has no further obligation to the authors. The authors are free to re-submit revised manuscripts but they are informed that these submissions will be subjected to a new full review process. Manuscripts falling into category (a) are, for the most part, ready to publish "as is," with little if any revisions required. Manuscripts falling into the "Conditionally Accept" category require at least some revision before they will be fully accepted for publication. The conditions that must be met before this happens are carefully detailed in cover letters to the authors of these manuscripts. These letters clearly specify that the manuscript will not be published until these conditions have been met to the satisfaction of the editors. In some instances, the revised manuscript may be sent to one or more of the CEs who initially reviewed it for their feedback. When the conditions have been satisfied the authors are informed by letter that the manuscript is now ready for publication.

When a manuscript is accepted, the author will be notified and informed about the next steps in the publication process. To expedite the editing and publishing process, authors of accepted manuscripts will be asked to provide their final version on IBM-compatible or Macintosh floppy disks. Manuscripts produced using WordPerfect 5.1 for DOS or Microsoft Word 4.0 through 5.1 for Macintosh are preferred.

Manuscripts submitted to *AEQ* should not be under consideration for publication by any other journals, nor should they have been published previously in any form (see "Warrant Statement" in Section C). A paper may, however, have been presented at a meeting or conference. In such cases the author should state where and when such a paper was presented. After acceptance, a paper may not be published elsewhere without written permission from AAACE.

Review Criteria The following are used to review research papers submitted to *Adult Education Quarterly*:

1) ***Importance of the Problem***. A problem or subject addressed by a manuscript should contribute to knowledge or theory pertinent to adult and continuing education. Importance is enhanced when a paper promotes understanding, or improvement of practice.

2) ***Background***. Through the abstract and a brief introduction, readers should be provided with sufficient background information to understand the problem being addressed.

3) ***Purpose***. Whether stated generally or in greater detail—as is the case with hypotheses—the purpose of the paper should be clearly and unambiguously stated.

4) ***Literature Review***. Research and scholarship should be linked to relevant literature and theory. The applicability of the research and the quality of the discussion are more important than the length of the review.

5) ***Approach and Procedures***. The approach and procedures must be appropriate for addressing the stated purpose(s) and research question(s).

6) ***Findings***. Findings must be presented and documented to show clear relationships to the purpose(s) and research question(s). Evidence needed to support conclusions must be clearly identified, including the presentation of statistics, charts, and graphs, use of quotations, observational data, references, and citations.

7) ***Conclusions***. Conclusions and logical inferences should be pertinent, clearly drawn, and convincingly supported by evidence.

8) ***Readability***. All manuscripts must be well-organized, well-written, and readable.

Book Reviews Book reviews are solicited by the Book Review editor. These reviews are not submitted for blind review but are reviewed and edited by the review editor. Decisions as to the books to be reviewed and who is asked to review them are also made by the Book Review editor. "Essay Reviews" of a series of books on selected topics are occasionally commissioned by the editors of *AEQ*. These essay reviews are not submitted for review but are handled by the editors themselves. If you have suggestions for books to be reviewed, or if you should like to review a book, contact: M. Carolyn Clark, Dept. of Education-HRD, 615 Harrington, Texas A&M University, College Station, Texas 77845; Tel: 409-845-4086.

Disposition of Manuscripts Submitted

We receive approximately 100 manuscripts per year. Over the tenure of our editorship, the average acceptance rates have varied between 20 and 30 percent. The content of manuscripts, as well as the authorship, reflect our commitment to diversity within the field of adult education and our intention to encourage more articles focused with an international perspective. Methodologically, we continue to accept and publish manuscripts that represent quantitative, qualitative, historical, and philosophical perspectives.

Reflections and Future Directions

While HRD topics have not appeared prominently in the various surveys of articles published in *AEQ*, the subject has nevertheless received attention within the pages of the journal. Examples of these include Karen Watkins' recent essay review on the definition of HRD and Blomberg's piece on cost-benefit analysis for training. This list might also include pieces which are less overtly HRD-specific but have had to do with adult education in workplace settings. Joyce Stalker's article on "Deconstructing the Myth" illustrates this kind of HRD related article.

HRD researchers are invited and encouraged to submit their work for consideration in *AEQ*. Our position as editors (and hopefully speaking for our editorial board) is that articles are not considered primarily on their ideological persuasion but on their scholarship and contribution to research and theory in the field. The journal seeks top quality manuscripts whatever their political or ideological hue as long as they fall within the scope of the journal. There are too few scholars conducting rigorous research or advancing theory within our fields. While we do not disclaim the political or ideological contexts in which all research and theory are conducted, these positions should not be used to make decisions on the merit of the scholarship. Our journals should be the place for dialogue and discussion around these differences, not a context for censorship or exclusion.

Trends in Research Methodologies The ascendence of qualitative research within the academic community is influencing editors and publishers of scholarly education journals. Criteria arising from and driven by particular methodological or epistemological approaches are being increasingly called into question. Reviewers and editors alike search for "common ground" amid this growing climate of methodological relativism. For example, as they struggle to find a voice to express their work, postmodernist scholars often tax our review editors and ourselves with their often complex and difficult language. Research designs completely foreign to traditional research are emerging within the qualitative arena and stress our abilities to effectively assess their soundness. Authors struggle to find new ways of presenting findings that are more consistent with the epistemological frameworks within which the research was conducted. Similar to the traditional art critic years ago who wondered whether modernist paintings represented art, we look at these new articles and ask, "Is this scholarship?" What constitutes "good scholarship" within these newer approaches is a question that needs to find space within our journals and we as editors need to begin convening symposia to further the conversation.

In addition to the difficult questions being posed by the nature of this research, reporting it is creating some very practical problems for editors and publishers. The substance of qualitative research studies is often difficult to communicate within the page limits traditionally imposed by editorial policies. Publication of qualitative studies sometimes results in fewer articles per issue, as allowance is made for the expanded nature of these articles. We are being pressured by these scholars to find room in our journals for their work or they will take their marbles and go elsewhere. Many of these papers represent excellent pieces of scholarship and we as editors do not want to lose them to other educational journals. But with the economic pressures that most journals are experiencing, how do we change to accommodate these newer form of research?

Trends in Society Current trends within society are likely to influence the nature of the articles submitted to and considered for publication in *AEQ* and other journals dedicated to adult learning. Increasingly, emphasis in both policy and practice is being placed on the relationship of education and work. While education for work has always been a prominent aspect of the field of adult education, research and theory has largely focused on worker and labor education. Upheavals within labor and rapidly changing economic conditions in many countries throughout the world are likely to place more emphasis on this orientation, especially within adult populations. The challenge is to fully understand the complexity of these changes through careful research and theory and to avoid a narrowly focused vocational instrumentalism which is often reflected in the statements and documents of many policy-makers.

These changes are also creating demands for changes in the way higher education sees itself

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and does its business. We are being increasingly pressured to design educational programs and to conduct research which are more "relevant and meaningful" to the concerns of the "real world." Few of us would disagree that what we do should be relevant and meaningful to the needs of society. What is problematic, however, and should be a focus of our work as scholars, are the questions of who defines these needs, in whose interests are they being pursued, and what do we mean by relevant and meaningful. For those of us responsible for preparing professionals within our respective fields, these questions represent a potential area of scholarly endeavor and should be reflected in the pages of our journals. Examples of these areas of "need" which occupy current public debate are welfare reform and the increasing emphasis on punishment rather than rehabilitation of criminal offenders. Both areas involve education and training of adults as a central element in the debate. Yet one would be hard pressed to find sustained dialogue on these issues within our journals.

Conclusion

In the past, *The Journal of Adult Education* has been an outlet for articles related to the training and education of adults for business and the workplace. Its successor, *AEQ*, has continued this tradition, with an increased emphasis and focus on research and theory. While the differences between this journal and *HRDQ* may be blurred relative to education and training for the workplace, *AEQ* is increasingly serving as a forum for scholars who take a critical perspective to HRD. The journal, however, continues to encourage all forms of scholarship related to HRD and no scholar should feel that the intellectual climate of *AEQ* is somehow inappropriate for their work. The future of publication in adult education and HRD faces a number of formidable challenges, both within the scholarly community and from quantum changes within society. Editors, reviewers, and the higher education community in general need to sustain conversation and dialogue around these issues, particularly within the pages of scholarly journals.

Creating Clover—*Human Resource Development International*

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The role that Human Resource Development International (HRDI) might play in the field of HRD is explored through the image of the clover leaf, in which I suggest that different aspects of HRD contribute something unique, and that together they provide synergy. This is followed by details for contributors.

In preparing to write this I read over the contributions from Journal Editors at last year's conference. This humbled me, and made me even less sure of what to say. So much of what I think is important has already been said, excellently, about other journals. Where can Human Resource Development International (HRDI) be placed within this field of excellence? I was then struck by the image of a clover leaf. Clover is a common ground hugging plant in the UK and I can remember sunny childhood days searching for (and finding!) a lucky four leaf clover. The clover leaf starts as quite a tight ball, and as it grows it also straightens out and opens up into a trefoil - three leaves that together make one. In well groomed gardens clover is normally considered to be a weed, however it has many uses and has a strong role in the agricultural base of the nation - as a soil conditioner, a valuable feed for animals, and a favourite flower for honeybees. We could say that its presence adds to the field. I wish to make the same case for HRDI.

The Trefoil of Learning, Performance and Integrity

It has been said before (many times by many people, see McLean (1997) and Swanson (1990)) but bears repeating. The HRD community is diverse, eclectic, vibrant and dynamic. It is what we make of it. As I comment in the first editorial of HRDI:

> 'Perhaps what I can do is describe it (HRD) in terms of continua. I have discussed some of these above: theory and practice; SMEs and megalithic organisations; public and private; modern and post-modern. Others also spring to mind, for example, I know that sometimes it is about individuals, and at other times it is about organisations; about profit and ethics; high tech. and less advanced; rote learning and development; providers and recipients; future and past; writers and readers; individual difference and mass trends; assertion of the ego and collectivity; .. as I continue I realise that each of these continua interacts or co-varies with others. I can visualise this as a three-dimensional sphere that moves, shifts and fluctuates. I also realise that it is no different to the sort of image I might build if I were asked to describe the human condition.'

Lets play around with links between HRD and clover. We can give HRD a body, as of the clover leaf, and suppose that as the clover leaf of HRD slowly unfurls, it uses each of these interacting continua as nutrients or threads to its existence. As people we can sit in the sun and look at the 'body' of HRD. As researchers we can examine different aspects of the whole, we can explore and attempt to understand it and its effects on the wider environment. As artists we can appreciate the beauty of it, we can work with it and create new forms of being. As people, however, we can do both - we do not have to split ourselves into the stereotypical soulless 'researchers' or non-rigorous 'artists'. In fact, I believe that we cannot avoid doing both at the same time. The act of creation involves understanding, and the act of understanding is, itself, creative. The feeling when understanding and creativity are moving forward together, of being involved in something with one's whole being, feels right, and is magical.

We could extend the analogy to talk of the three leaves of the one clover leaf as theory, practice, and being. One of the great difficulties and root of potential of HRD as a field of study is the way in which theory informs practice, and practice, theory. Balancing these two presents opportunities and challenges, yet the rewards and problems are infinitely greater as we also attempt to balance 'being' alongside them. This is the act of putting ourselves and other people in the

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equation - accounting for the role of the researcher in the researched, the individual agency of the practitioner that influences and gives lie to the idea of 'one best way' of doing things. The idea of putting our hearts and souls behind what we do.

It is a short step from talking of understanding, creativity, and coherence, or theory, practice and being, to talking of the adoption of a holistic view of learning, performance and integrity - three bases upon which both AHRD and HRDI are built. These words are likely to mean different things to different people and have different implications within different cultural settings, however, I suggest that wherever and whoever we are, the act of looking at the clover leaf of HRD, the particular spectacles and lenses that each one of us brings to the examination, holds the potential to re-create it anew for each of us. I hope that HRDI will be one of the vehicles for such re-creation.

The Trefoil of HRDI Sponsors

Of course, HRDI is not the only publication associated with AHRD, and HRDI is not the only publication that aspires to learning, performance and integrity. Similarly, AHRD is not the only sponsor of HRDI. The other two sponsors are the University Forum for HRD and Euresform - and so we have another trefoil. This seems to me to be a particularly appropriate trefoil of sponsorship, that provides a strong base from which HRDI can grow. The University Forum for HRD has its roots in a UK network of Universities (that included representation from the Government through the National Council of Vocational Qualifications, and sponsorship from the major HR practitioner body - the Institute of Personnel and Development). This group was initially established to examine qualification routes within the profession, and in particular, to learn about and implement nation wide joint academic and professional competency based qualifications. The act of attempting to do so was an act of attempting to define the field, which itself was an act of learning how situated and limited our knowledge is - thereby opening up a wide range of research activities. Euresform's roots were similar. It is a European network of universities that came together, with European funding, to research into and implement a cross-European system of academic qualifications and professional accreditation. This was done by establishing mutual recognition of provision via a set of learning outcomes that individuals would need to achieve in order to be seen as a senior European professional. These outcomes included the need for evidence of professional interventions in another culture and thus a system of cross-European practical placements has been established.

At one level each of AHRD, Euresform and the Forum are fundamentally different. I am a member of all three and there is no way that I could be confused about which one I am attending at any one time. Each is very much a product of its national roots and reinforces my cultural stereotypes - AHRD is big, bright and buzzy; the Forum is quieter, gentle, and we have cups of tea at 3pm, and Euresform is multilingual, intriguing and confusing as to get to some sort of common understanding of any one word takes a very long time. Having said that I think that there is also much in common between the three networks. There is most certainly a common appreciation of the joys and difficulties of balancing theory, practice and being. There is a firm belief that, whether or not organisations intend to do so, the way in which they 'realise' HRD has a profound effect upon their present and future well being. There is also a strong desire to know and learn more - to enhance their research-based activities. In other words, I suggest that not only are the three sponsors of HRDI united in their focus on the trefoil of learning, performance and integrity, they are also united in their views of the way forward - attempting to better embrace balance (integrity), the 'realisation' of HRD (performance) and the enhancement of research (learning).

I suggest that it is timely that these networks should learn more of each other. Knowledge of the other sponsors carries practical benefits - student placements, alternative publication outlets, access for research, and so on. In addition, I suggest that by adopting multiple perspectives each sponsor will help the field develop in a more 'global' way than if they did so only from their own perspective. Of course, this is not to deny, in any way, the continuing need for detailed, rigorous and in depth examination of one's of situation, and each sponsoring body has access to publications that do that. By its international nature, HRDI is not able to provide that in-depth internal cultural mirror. What HRDI can do is to provide a window, a glimpse, onto other cultures so that we may each think of our own in a slightly different way. I hope that HRDI will be able to tap into the synergy generated by the trefoil of sponsoring bodies, and so be part of developing the HRD field internationally.

HRDI and other Publications

There is clearly some possibility of seeing other AHRD sponsored publications as competitors, however I would much prefer to think of them as sisters and brothers (without assigning a gender to any particular one). Perhaps the journal closest to HRDI within the AHRD suite of publications is HRDQ. Perhaps, at present, this is just wishful thinking. HRDQ has had nine highly successful years, and HRDI is just starting out. HRDQ has an excellent reputation, and HRDI is hoping to emulate that... and so on. I would be extremely happy if in nine years time HRDI is able to look beck on a track record similar to that of HRDQ. Perhaps HRDQ is HRDI's big brother, introducing HRDI into the wide world, and helping HRDI find or create its own identity. As HRD matures it grows and develops new areas of interest and specialities. There is ample space for all, and our boundaries will become clearer with time, each journal with a life and identity of its own. As people contribute they extend the body of knowledge, and in doing so create form in the fuzzy shape described above. This links to an important question for contributors, namely: 'to which journal should I submit this particular piece of work?' The answer to this will become clearer with time (and I enclose below HRDI's 'notes for contributors', as a start in this process), and is, of course, partly influenced by the contributions themselves, which, in turn, are influenced by the 'identities' of the different journals.

I hope my title to this has now become clear. I see, on many levels, a link between the trefoil of clover and the multiple parts of HRD. I suggest that the three leaves of clover make the one leaf, so the synergy of the coming together of the parts of HRD (whether it is ways of understanding, sponsoring bodies, or whatever) create something new. As clover, a humble and often ignored or even derided plant, adds to the field, so I suggest that new interpretations of HRD might develop from small beginnings but can influence the way of work and the lives of many.

Within this extended analogy I have yet to pin down what the lucky four-leaf clover might represent. Perhaps luck is a personal thing, perhaps we need to create that as well... perhaps the best way of having a say in this is to contribute to HRDI.

Notes for Contributors

HRDI promotes all aspects of practice and research that explore issues of individual, group and organisational learning and performance. In adopting this perspective HRDI is committing itself to questioning the divide between practice and theory; between the 'practitioner' and the 'academic'; between traditional and experimental methodological approaches and between organisational demands and the demands of scholarship. HRDI publishes the following types of contribution. Please make clear which type of contribution you are submitting.

- **High quality papers for blind peer review.** Articles should be 5,000 to 6,000 words in length. If you are submitting for blind peer review please ensure that all references to the author(s) are on a separate sheet.
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Please feel free to discuss the nature of a contribution with one of the HRDI editors.

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Submission of manuscripts Authors should submit 4 complete copies of their paper, with any original illustrations, to Carole Elliott, HRDI Administrator, HRD Pathway Unit, Dept. of Management Learning, Lancaster University, Lancaster LA1 4YX. United Kingdom. email: c.j.elliott@lancaster.ac.uk tel: + 44 (0)1524 594034 fax: + 44 (0)1524 844262

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An abstract of the paper, of up to 150 words, should accompany the article. In addition a list of up to 6 key words, suitable for indexing and abstracting services, should be supplied. Please refer above to see expected word lengths. If your wordprocessor is capable of doing a word count please use it to print this at the end of the text, together with the date of the manuscript. Notes should be kept to a minimum and placed at the end of the article before the references; footnotes should be avoided. A brief biographical note about each author should be supplied on a separate sheet. Details should be given of authors' full postal and E-mail addresses as well as telephone and fax numbers. Authors are requested to send an electronic version of their article on disk, providing details of the name and version number of the word-processing software used. It is important that authors ensure that their typescript is an exact printout of what is on the disk.

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References The author-date reference system, preferred in this journal, uses the name of the author, the date of publication and, following quoted material, the page reference, as a key to the full bibliographic details set out in the list of references - e.g. 'Many composers ... have attempted to return to this state of childhood' (Swanwick 1988: 56); several authors have noted this trend (Smith 1970; Jones and Cook 1968; Dobbs et al. 1973). [N.B. et al. to be used when there are three or more authors.] The date of publication cited must be the date of the source referred to; when using a republished book, a translation or a modern version of an older edition, however, the date of the original publication may also be given. Where there are two or more works by one author in the same year, these should be distinguished by using 1980a, 1980b, etc. The reference list should include every work cited in the text. Please ensure that dates, spelling and titles used in the text are consistent with those listed in the References. The content and form of the reference list should conform to the following examples. Please note that page numbers are required for articles, both place of publication and name of publisher should be given for books and, where relevant, translator and date of first publication should be noted. Do not use et al. in the reference list; spell out each author's full name or surname and initials.

Book/multiple author:

Kay, J., Mayer, C. and Thompson, D. (1986) Privatization and Regulation, Oxford: Clarendon Press.

Article in edited volume:

Kreile, M. (1992) 'The political economy of the new Germany', in Paul B. Stares (ed.) The New Germany and the New Europe, Washington DC: Brookings Institution, pp. 55-92.

Article in journal:

Streeck, W. and Schmitter, P.C. (1991) 'From corporatism to transnational pluralism: organised interests in the single European market', Politics and Society 19: 133-64.

Edited text:

Smith, Adam (1976) [1776] An Inquiry into the Nature and Causes of the Wealth of Nations, ed. R. H. Campbell, A. S. Skinner and W. B. Todd, Oxford: Oxford University Press.

Translated text:

Jaspers, K. (1983) General Human Resource Management, 7th ed, trans. J. Hoenig and M. Hamilton, Manchester: Manchester University Press.

Article in newspaper:

Barber, L. (1993) 'The towering bureaucracy', Financial Times, 21 June.

Unpublished:

Zito, A. (1994) 'Epistemic communities in European policy-making', Ph.D. dissertation, Department of Political Science, University of Pittsburgh.

Notes on Style

It would be helpful if contributors were to bear in mind the following points of style when preparing their papers, particularly if they are being submitted on disk.

Justification of text If you are using a computer or wordprocessor, use unjustified mode. Leave the right margin ragged and avoid word divisions and hyphens at the ends of lines. Only insert hard returns at the end of paragraphs or headings.

Punctuation Use a single (not a double) space after a full point, and after commas, colons, semicolons, etc. Do not put a space in front of a question mark, or in front of any other closing quotation mark.

Spelling We prefer spellings to conform to the new edition of the Concise Oxford English Dictionary and to follow the Oxford Dictionary for Writers and Editors. Use -ize, in preference to -ise, as a verbal ending (e.g. realize, specialize, recognize, etc.). Note, however, several words correctly end in -ise (e.g. advertise, enfranchise, exercise, etc.); note also analyse (English spelling) analyze (American). Initial capitalization Please keep capitalization to a minimum. When possible, use lower case for government, church, state, party, volume etc.; north, south, etc. are only capitalized if used as part of a recognized place name e.g. Western Australia, South Africa; use lower case for general terms e.g. eastern France, south-west of Berlin.

Full points Use full points after abbreviations (p.m., e.g., i.e., etc.) and contractions where the end of the word is cut (p., ed., ch.). Omit full points in acronyms (HMSO, USA, BBC, NATO, plc), after contractions which end in the last letter of the word (Dr, Mr, St, edn, eds, Ltd) and after metric units (cm, m, km, kg). Note especially ed. eds; vol. vols; no. nos; ch. chs, etc.

Italics Indicate italics by underlining, in preference to the italic font, and use for titles of books, journals, newspapers, plays, films, long poems, paintings and ships. Extensive use of italic for emphasis should be avoided.

Quotations Use single quotation marks for quoted material within the text; double quotation marks should only be used for quotes within quotes. Do not use leader dots at the beginning or end of a quotation unless the sense absolutely demands. For ellipsis within a quotation use three leader dots for a mid-sentence break, four if the break is followed by a new sentence. Quotations of over forty words should be extracted and indented and no quotation marks used.

Numerals In general spell out numbers under 100; but use numerals for measurements (e.g. 12 km) and ages (e.g. 10 years old). Insert a comma for both thousands and tens of thousands (e.g. 1,000 and 20,000). Always use the minimum number of figures for ranged numbers and dates, e.g. 22-4, 105-6, 1966-7; but use 112-13, 1914-18, etc. for 'teen numbers. Use the percentage sign only in figures and tables; spell out 'per cent' in the text using a numeral for the number (e.g. 84 per cent).

Dates Set out as follows: 8 July 1990 (no comma), on 8 July, or on the 8th; 1990s (not spelt out, no apostrophe); nineteenth century (not 19th century) and insert hyphen when used adjectivally (e.g. nineteenth-century art).

En rules Since there is no en rule on a standard keyboard, use a double hyphen for en rules; use these to link number spans (e.g. 24--8); to connect two items linked in a political context (e.g. 'Labour--Liberal alliance', 'Rome--Berlin axis') and to link the names of joint authors (e.g. Temple--Hardcastle project).

Proofs

Authors are expected to correct proofs quickly and any alteration to the original text is strongly discouraged. Authors should correct typesetter's errors in red; minimal alterations of their own should be in black.

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ADVANCES in Developing Human Resources: The Academy's New Topical HRD Monograph Series

Richard A. Swanson
University of Minnesota

ADVANCES in Developing Human Resources is sponsored by the Academy of Human Resource Development and published by Berrett-Koehler. The mission of *ADVANCES* is to provide theoretically sound explorations and/or reporting of selected and timely advances in the development of human resources.

The Academy of Human Resource Development (Academy) and Berrett-Koehler Publishers (BK) are thrilled to announce a new quarterly HRD monograph series to be sold through subscription and as individual copies. The name of the series is *ADVANCES in Developing Human Resources*. The first issue of *ADVANCES* will appear in the summer of 1998.

Individual issues of *ADVANCES* will be devoted to important and/or timely topics related to the development of human resources. The topics will primarily fall within the general realms of performance, learning, and/or integrity within an organizational context. The topic title of each issue will be the dominant message on each cover. The important editorial balance for the series will be between theory, practice, and readability. Each issue will strive to be very readable and relevant-- to the point of being interesting to reflective practitioners while being theoretically sound.

The Academy will provide the intellectual capital for *ADVANCES* including series editorship, editorship of individual issues, editorial review, a majority of researchers and authors, and assistance with marketing. BK will provide marketing, editing, production, and distribution of the monograph series.

The Academy Board of Directors is very excited about this new undertaking and hope that a number of Academy members will volunteer as issue editors in the coming weeks.

Volume 1: Issues 1-4

Dr. Richard J. Torraco will serves as editor for *ADVANCES* issues 1 & 2 of Volume 1. These back-to-back issues are a special case that will not likely repeat itself. The Academy is indebted to Dr. Torraco for having pursued these manuscripts as a part of the Academy's pre-conference effort and for allowing the Academy to use his work to secure this new series. Volume 1 of *ADVANCES* will be as follows:

Issue 1	*Theory and Practice of Performance Improvement:* Richard J. Torraco, Editor
Issue 2	*Human Resource Development's Role in Performance Improvement* Richard J. Torraco, Editor
Issue 3	*Encouraging Informal Workplace Learning* Victoria J. Marsick, Editor
Issue 4	*Impact of the Global Economy on Developing Human Resources* Michael J. Marquardt, Editor

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(Note: Volume 2 proposals due by April 15, 1998)

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2. Proposed completion date of the full manuscript.
3. Editor and his/her full title address and multiple means of contact (phone, fax, e-mail).
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5. A tentative list of chapter titles along with chapter authors and their affiliations.
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7. Optional attachments (e.g. editor bio, related writings by editor and/or authors).

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Form of the Monograph

ADVANCES is a quarterly publication will be a standard 6"x9" size and 100 pages of final copy (150 manuscript pages). It will have a lively cover and will be graphically appealing throughout. Manuscripts must conform to the latest edition of the *APA Publication Manual.*

Due Dates for Manuscripts

The following schedule will be followed for the first volume and will be repeated in subsequent years. Two copies of the manuscript and a computer disk of the total manuscript in Microsoft Word 6.0 are required at each submission.

Initial Manuscript Due			*Revised Manuscript Due*			*Publication Date*		
May 1,	1998	1(1)	Aug. 1,	1998	1(1)	Jan. 1,	1999	1(1)
Aug. 1,	1998	1(2)	Nov. 1,	1998	1(2)	April 1,	1999	1(2)
Jan. 1,	1999	1(3)	Mar. 1,	1999	1(3)	July. 1,	1999	1(3)
Mar. 1,	1999	1(4)	June 1,	1999	1(4)	Oct. 1,	1999	1(4)

Relationship to other Academy Periodicals

The AHRD sponsors two other periodicals, the *Human Resource Development Quarterly (HRDQ)* and *Human Resource Development International (HRDI). HRDQ* is the premier research journal of the Academy and the HRD profession. Its primary goal is to report high quality research. *HRDI* is the new quarterly journal focused on reflective practitioners from around the world. Its primary focus is to report on innovative development efforts from an international perspective. Each issue of ADVANCES deals with a specific topic relevant to developing human resources. Its primary focus is to explore the knowledge base of a critical and/or timely topic in an in-depth and timely manner.

Conclusion

The AHRD Board of Directors is very enthused about the Academy's partnership with Berrett-Koehler Publishers to produce *ADVANCES in Developing Human Resources* and appreciates the confidence BK's President and Publisher, Steven Piersanti, has in the Academy.

Race, Gender and Mentoring Patterns

Linda M. Hite
Indiana University-Purdue University Fort Wayne

This study examines mentoring opportunities and patterns among black female professionals. Much of the mentoring research to date has focused on the influence of gender only on acquiring and maintaining productive mentoring relationships. The combined effect of race and gender on access to and continuation of mentoring resources remains to be determined. The data from this project add to that body of knowledge.

As the we approach the turn of the century, the workforce diversity predicted a decade ago is becoming a reality. Changes in labor pool demographics, competition from the global marketplace, interest in niche customers, and greater societal awareness of differing cultures has prompted organizational interest in exploring diversity issues (Loden & Rosener, 1991; Thomas, 1991; Cox, 1993). Yet, while company profiles are more likely to reveal more diverse individuals on employment rosters, only a small percentage are represented in the upper levels of management (Cox, 1993; Thomas, 1995). Access to the those positions still remains largely in the domain of the traditional majority. This is the new frontier of diversity in organizations, and a successful resolution depends in large measure on expanding management development efforts to prepare more qualified women and members of non-dominant groups for positions of leadership.

A key factor in the management development process is mentoring, bringing together junior staff members with more experienced employees who commit to offer professional support and guidance to enhance the career progress of their proteges. This relationship offers not only direction for young staff members, but also psychosocial support, upward career mobility, access to the power structure of the organization, and valuable information about the organizational culture (Fagenson, 1989; Ragins, 1989, 1997; Ragins & Scandura, 1994). Much of the research to date on mentoring of non-dominant group members has focused on gender. Several concerns have been identified regarding cross-sex mentoring in traditionally male dominated organizations. First, realizing that mentors typically choose proteges whom they perceive to be like themselves, women are at a disadvantage in a majority male setting, where men are more likely to be in positions of power (Ragins, 1989; Cox, 1993 ; Dreher & Cox, 1996). Second, women are less likely to be included in the informal settings where mentoring relationships often are formed over similar interests. Finally, social norms and assumptions about potential sexual relationships are barriers to male and female mentoring pairs (Noe, 1988; Ragins, 1989; Hale, 1995). Women mentoring women in male-dominated organizations poses dilemmas as well, the first being simply the small number of women in upper level positions to serve as mentors, and the lack of time those few women have to assist proteges. In addition, even when women hold executive titles, they may be perceived as having less power than their male counterparts, making them relatively less influential as mentors (Noe, 1988; Ragins, 1989; Hale, 1995).

Much of the research to date on mentoring barriers for women has assumed that those women are of the same race as the majority group within the organization. Gender difference is just one part of the scenario for women of color. When potential proteges differ from the dominant group not only by gender, but also by race, they face all the gender-related hurdles in combination with race-related barriers. D. Thomas (1989) refers to racial "taboos" that influence cross-race, and especially combined cross-race and cross-sex mentoring relationships, noting that the latter pose particular difficulties for mentor and protege. Consequently, women of color are doubly disadvantaged in their access to typically more powerful and plentiful white male mentors. Further, Blake (1995) found that even same-sex, cross-race relationships can be problematic, often stemming from white women's

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assumption that their progress in organizations has been on behalf of all women; and women of color feeling both that they have been unacknowledged in the process, and that they have not experienced the resulting benefits. Yet realizing that proportionally, women of color are even less well represented in senior level positions than white women (U.S. Bureau of Labor Statistics, 1994), the possibility of pairing women of color as mentors and proteges is even less likely than expecting that white women in upper management can mentor all of the white female proteges seeking assistance. Finally, Ragins and Scandura (1994) note that (white) women, by not being part of the traditionally dominant group within organizations, perhaps need mentoring even more than males. With the realization that women of color are twice removed from the ranks of the dominant culture, based on race as well as gender, their potential need for the benefits of mentoring would appear to be even greater than that of their white female colleagues.

Research Questions

The purpose of this study was to examine mentoring opportunities and patterns among black female professionals, who represent a large subcategory of women of color; and who, by virtue of the long history of black/white relations in the United States, are perhaps most likely to experience the effects of race as well as gender on their career progress.

Questions posed regarding mentoring patterns included: How often were gender and/or racial lines crossed in their mentoring relationships? Were the mentors more typically assigned or self-selected? Were the mentors and proteges frequently employed by the same organizations, or did the relationships develop outside of their work settings? Were these mentoring relationships usually perceived as positive or negative experiences?

Methodology

This segment is part of a larger research project exploring career progress of black women in organizations. The National Association of Negro Business and Professional Women's Clubs (NANBPW) was selected as the target organization for the study, because it offered access to a nationwide sample of black female professionals. The organization would not release a membership list, but did agree to mail the five page survey I had developed and piloted along with a cover letter that explained the purpose and logistics of the study. The full NANBPW membership was included in the survey distribution. Original discussions about the project included the tacit endorsement of the organization by mailing the survey in the official newsletter with a comment by the organization's president about the project being of interest to the membership. Ultimately however, the survey was deemed too large to include with the newsletter and the interim executive director (not the original contact) was hesitant to ask the president for a statement of her support of the project. After several months of waiting for the latter with no result, I decided to have the survey sent with only the cover letter of explanation as a means of inspiring interest and commitment to complete the instrument. The lack of access to mailing lists precluded tracking returns for additional reminder mailings. This factor, combined with the length of the survey, and the lack of recognized organizational support for the project likely contributed to the relatively small response percentage.

Although the final return percentage was lower than desired at just over 14%, the size of the initial mailing was large enough that even that response rate yielded 335 usable surveys. This overall number of responses from a nationwide sample provides a reasonable base from which to draw at least some preliminary conclusions.

Results and Conclusions

Several patterns appeared in the data that focused on being a mentor and having a mentor, leading to interesting comparisons and a mandate for additional study. For this discussion, see Table 1 for a list of the items and the summary of responses received.

On the variable of gender, respondents were largely mentors to and mentored by other women. However, it is worth noting the twelve points difference between the percentage of males who were mentored by respondents and those who were mentors for them. The 10% of males reportedly mentored by the respondents is small in comparison to the 22% of males who served as mentors for the participants of this study. This reflects the likelihood that fewer black women would be in positions of recognized organizational power to serve as mentors to males, but males typically would hold positions that would make them likely mentors for women of color.

Regarding same or different race for mentors and proteges, the discrepancies are greater. While the black women respondents reported being mentors to those of like race 76% of the time, they were mentored by someone of similar race to themselves only 56% of the time. These data reflect a lack of available mentors of color in most organizations, leading to cross-race mentoring 42% of the time for these respondents seeking mentors.

Table 1: Responses relating to "being a mentor" and to "having a mentor"

Variables	Responses in percentages		
1. Typically those I have served as mentor have been	10% Male	82%Female	8% Both
2. Typically those I have served as mentor have been the same race as I	76% Yes	23% No	1% Both
3. Typically those I have served as mentor have been from (inside or outside my workplace)	56% In	34%Out	11%Both
4. Typically those I have served as mentor have been (assigned or chosen informally)	24% Assign	69% Chose	7% Both
5. Typically my experience being a mentor has been	96% Pos	2% Neg	2% Both
6. Typically my relationships with those I have mentored have been (close=frequent interaction; neutral=regular interaction; distant)	62% Close	35% Neut.	2% Dist.
1. Typically my mentors have been	22% Male	72% Female	5% Both
2. Typically my mentors have been the same race as I	56% Yes	42% No	2% Both
3. Typically my mentors have been from (inside or outside my workplace)	56% In	40%Out	4% Both
4. Typically my mentors have been (assigned or chosen informally)	17% Assign	82%Chose	1% Both
5. Typically my experience having mentors has been	96% Pos	4% Neg	
6. Typically my relationships with my mentors have been (close=frequent interaction; neutral=regular interaction; distant)	64% Close	27% Neut.	9% Dist.

Responses for items in the "being a mentor" set represent approximately 60% of total N (ave. 202 responses); responses for items in the "having a mentor" set represent approximately 55% of the total N (ave. 186 responses). Those who had not had these experiences were directed to leave these item sets blank.

"Typically" was defined as being at least 75% of the time.

The items that focused on mentors and proteges being in or outside of the workplace were remarkably similar, suggesting that the respondents' mentoring networks were defined by their organizations only a little over half the time. The rest of their mentoring activities were outside of the work arena. These data suggest that black women, finding few mentor candidates within their work contacts, seek that type of relationship elsewhere; and that black women willing to be in the mentoring role may not be perceived as holding sufficient power within traditional work organizations, but are seen as valuable mentors in other settings. Ibarra (1993) referred to the former as "opportunity context" (p. 66), assuming that when one setting does not offer options for same-sex, same-race relationships, individuals may broaden their networks by going outside their immediate environment.

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Similarly, the respondents indicated they informally chose and were chosen as mentors more often than they were assigned to that type of relationship. However, upon comparison, the results show that the participants in this survey were selected to be mentored more often than they were selected to serve as mentors to others. These discrepancies again support the conjecture that black women are seen as less powerful than others within their professional networks.

In comparing responses to the experiences of being mentor and having one, both were cited as positive by 96% of the respondents. Yet, the following item, which inquired about the relative closeness of those mentoring interactions, indicated that only about two-thirds were identified by the respondents as being "close," with an additional third being described as "neutral." These responses, in conjunction with the other data, prompt several assumptions. One is that the women in this survey were aware of the value of mentors, and therefore perceived their relationships as positive, despite the inherent imperfections; perhaps making the best of the situations. Another is that most chose not to stay in negative mentoring situations long enough to consider them as true mentoring relationships (and therefore relevant to this survey). A third assumes that not everyone prefers closeness between mentors and proteges or considers that as a criterion of good mentoring. Ibarra (1993) and Thomas (1989) offer an additional explanation. Both refer to the relative lack of closeness in cross-sex and cross-race mentoring relationships, based on less similarity on which to base the interactions and some of the social taboos that make such relationships difficult to establish as well as to maintain.

Additional patterns in mentoring are evident when responses to items on being a mentor, having had a mentor during one's career, and currently having a mentor are compared by position level. Table 2 illustrates these points.

Table 2: Affirmative responses in percentages for "being a mentor," "having had a mentor," "currently have a mentor" compared by management level

Management Level	Been mentor	Had mentor	Have mentor
Not in management	69%	55%	22%
First level management	70%	57%	16%
Middle management	76%	76%	26%
Upper management	84%	65%	22%
Business owner	67%	71%	8%

The percentage of respondents who indicated they have been mentors has a positive correlation to hierarchical management levels, up to the point of being a business owner. This pattern suggests that these participants understand the value of mentoring others as they progress in their own careers, and/or that they are much in demand as more women of color enter the workforce. The drop at the business ownership level may be the result of less time to spend on activities not directly related to the growth of the business.

Of those who noted they have had a mentor at some point in their careers, the peak appears at the middle management level. Yet each of the levels at or above that point reveal that between two-thirds and three-fourth of the respondents have had mentors, supporting previously cited research on the value of mentoring in career progression. Davidson (1997) however, cites studies where 85-95% of white females managers reported having had a mentor. Comparing the results of this study with that data suggests that black women remain disadvantaged regarding mentoring opportunities.

Perhaps the most surprising of these data are the responses about current mentors. In contrast to the previously indicated mentoring experiences, the percentages of those who identified having a mentor at the time of this survey appear low, with business owners representing the lowest point at 8%.

According to these results, while a large percentage of the participants in this study have served as mentors and many have had mentors themselves, they currently do not identify themselves as proteges. Recognizing the potential importance of a mentoring relationship in career development, it is particularly disconcerting that the first level management category revealed so few respondents as current proteges. At that point in a career path, the influence of a mentor can be particularly important.

Research Contribution

This study offers some insights into the mentoring patterns of black women, as a subset of women of color. While the results attest to mentoring activity among the survey respondents, they also reinforce the need for increased availability of same-sex, same-race mentors in work environments. Increased availability can yield more mentoring networks, which can augment management development opportunities for people of color, which can prepare more diverse people for positions of leadership, which can yield more mentors and mentoring networks.

A key limitation of this project is the lack of specific comparative information on white women and on black men. The former to determine if the patterns revealed are tied only to gender and not to the race and gender combination; the latter, to identify patterns that may be race, but not race and gender related. Additionally, while the data here cited are of interest and are useful to identify patterns among one group of women of color, the need for more research is clear. Therefore, additional studies, using similar survey items, are planned with target populations of white women, black males, and other women of color.

The workplace of the future will be more diverse than it has been at any other time in the history of the United States. Organizations that hope to succeed in the competitive global market will need to recruit and retain the best talent and maximize the potential of their entire workforce. Just as medical testing results based on male subjects only have proved inadequate for predicting health patterns for women, management development practices based only on the traditional model of white males, and more recently, white females, are not sufficient to realize the potential of people of color.

Ragins and Scandura (1994) have described mentoring relationships as, "a key career resource in organizations" (p. 957) and "important for all organization members" (p. 957). As such, it is important that those relationships be accessible to women as well as to men, and to people of color as well as to members of the current majority culture. Factors that have been the topic of past gender-related research such as opportunities for mentoring relationships, the value of assigned versus self-selected mentors, and the limitations of mixed mentor-protege matches need to be addressed from the perspective of the combined effects of race and gender. Otherwise, since much of the mentoring research to date has focused primarily on white males and females, we as human resource development researchers and professionals risk promoting what Bell, Denton, and Nkomo (1993) identify as "strategies that support the mobility of one group of women at the cost of the mobility of other women" (p. 110). While this study on mentoring patterns of black women cannot address the concerns of all black women, far less the concerns of all people of color; it does add to the developing body of knowledge about a more culturally diverse workplace.

References

Bell, E. L., Denton, T. C., & Nkomo, S. (1993). Women of color in management: Toward an inclusive analysis. In E. Fagenson (Ed.) Women in management (pp. 105-130). Newbury Park, CA: Sage Publications.

Blake, S.D. (1995, August). At the crossroads of race and gender: Lessons from the mentoring experiences of professional black women. Paper presented at the Academy of Management Annual Meeting, Vancouver, B.C. Canada.

Cox, T. H., Jr. (1993). Cultural diversity in organizations: Theory, research and practice. San Francisco: Berrett-Koehler Publishers.

Davidson, M. J. (1997). The black and ethnic minority woman manager: Cracking the concrete ceiling. London: Paul Chapman Publishing Ltd.

Dreher, G. F.,& Cox, T. H. (1996). Race, gender and opportunity: a study of compensation attainment and the establishment of mentoring relationships. Journal of Applied Psychology, 81(3), 297-308.

Fagenson, E. A. (1989). The mentor advantage: perceived career/job experiences of proteges versus non-proteges. Journal of Organizational Behavior, 10, 309-320.

Hale, M. (1995). Mentoring women in organizations: Practice in search of theory. American Review of Public Administration, 25(4), 327-339.

Ibarra, H. (1993). Personal networks of women and minorities in management: a conceptual framework. The Academy of Management Review, 18(1), 56-87.

Noe, R.A. (1988). Women and mentoring: A review and research agenda. Academy of Management Review, 13, 65-78.

Ragins, B. R. (1989). Barriers to mentoring: the female manager's dilemma. Human Relations, 42(1), 1-22.

Ragins, B. R. (1997). Diversified mentoring relationships in organizations: A power perspective. Academy of Management Review, 22(2), 482-521.

Ragins, B. R., & Scandura, T. A. (1994). Gender differences in expected outcomes of mentoring relationships. Academy of Management Journal, 37(4), 957-971.

Thomas, D.A. (1989). Mentoring and irrationality: The role of racial taboos. Human Resource Management, 28(2), 279-290.

Thomas, R.R., Jr. (1991). Beyond Race and gender: Unleashing the power of your total work force by managing diversity. New York: AMACOM.

Thomas, R.R., Jr. (1995). From affirmative action to affirming diversity. In C. Harvey & M. J. Allard (Eds.),Understanding diversity: Readings, cases, and exercises (pp.48-63). New York: HarperCollins College Publishers.

U.S. Bureau of Labor Statistics. (1994). [Employed and experienced unemployed persons by detailed occupation, sex, race, and Hispanic origin, Annual Average 1994]. Unpublished raw data.

Impatriation Via a Not-for-Profit Organization: An Interpretive Study of the Cultural Adjustment of International Catholic Priests and Sisters to Living in the Upper Midwest United States and the Role of the Organization

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In-depth interviews with impatriate (i.e. internationals residing in the U. S.) Catholic priests and sisters reveal their perceptions of impatriation and the role of their affiliate religious organization in assisting impatriates in cultural adjustment. Themes that emerged from this interpretive study suggest that impatriates affiliated with religious organizations find that their cultural adjustment is impeded by social, cultural, and preparedness factors that can be alleviated by the organization.

Hammer (1989) cited communication skills, the ability to establish interpersonal relationships, and the ability to deal with stress as the three central dimensions important to an individual's effective functioning in a foreign culture. Assuming Hammer to be correct, U. S. sponsoring organizations, and international priests and sisters who impatriate to the United States should not be surprised at the impatriates' difficulties in adjusting to this foreign culture. Often the impatriates either do not speak English or speak very little English when they arrive, thus, their communication is limited; often they work in isolation--geographical, physical, and/or verbal,--so, again, communication as well as opportunities to establish interpersonal relationships are limited; and because the first two dimensions, communication and interpersonal relationships, are limited, the impatriates' ability to deal with stress can be impaired, as well.

Problem Statement

The senior administrative level of a large Catholic archdiocese in the upper Midwest observed that the international priests and sisters called to assignments in both urban and rural areas experienced difficulty in adjusting to United States culture.

Purpose Statement

Published research reports of impatriation (*coming* into a host culture as opposed to *going* to a host culture [expatriation]} appear to be scarce, if not non-existent; consequently, published research reports of impatriates affiliated with religious or other non-profit organizations are even less likely to exist than if they had been affiliated with for-profit organizations. The purpose of this study was to learn the perspectives of impatriate Catholic priests and sisters regarding their impatriation and the role of their sponsoring organization and to interpret those perspectives within a theoretical framework in order to understand the meaning of their impatriation experience. Ultimately, the research will lead to design and development of training programs focused on improving and accelerating the impatriation process.

Research Question

Pilotta (cited in Gudykunst & Nishida, 1989) labeled phenomenology a fruitful perspective for the study of intercultural communication. Thus, this research is viewed as a hermeneutic

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phenomenological study, searching for description (phenomenology) as well as understanding (hermeneutics) of the phenomenon of impatriation. Using an ethnographic perspective to gather information, only one question was asked: What is it like to be an international Catholic priest/sister in the upper Midwest?

Literature Review

The literature indicates that business organizations are not fully appreciative of the psychological impact of working and living in a culture other than one's own (McFarland. 1995, 1996). This seems to be true for not-for-profit, religious organizations as well as business organizations, as cultural preparedness training is not recorded in the literature for international personnel affiliated with religious organizations. This lack of cultural preparedness training not only corroborates reports of lack of training and inadequate training for business expatriates, but also implies reliance on self and religious faith to develop human resources even as it brings up a question of ethics.

Human Resource Development Perspective. Among business organizations, the psychological impact of expatriates' failure to culturally adjust is evidenced by an astoundingly high failure rate. Where failure is defined as returning home from an international assignment before the assignment is completed, Copeland (1985, 1990) reported expatriate failure rates of up to 40%, generally, and even 70% in terms of Third World Countries. A 1993 study of Fortune 500 manufacturing sector organizations found that 83% of responding organizations reported up to 14% expatriate failure (McFarland, 1995). Perusal of the literature suggests that high failure rates should not be a surprise if expatriates do not participate in cultural preparedness training: Lack of preparation to live in another culture can result in serious culture shock, which leads to decreased performance and productivity. Whereas, business expatriates can return to their home culture (but not without personal and professional consequences) if the psychological adjustment is too difficult, members of religious orders, more likely, are assumed to have their religious faith to carry them through problems or psychological distress and rarely have the option of leaving their post. When they do leave a post, they are likely to be relocated into another foreign setting. Human resource development is dependent on one-self and faith.

Ethical Perspective. Although this paper is devoted to a report of research, the question of ethics arises for all types of organizations that relocate people with no or inadequate cultural preparedness training for the purpose of working in an unfamiliar culture. The ethical question is especially poignant considering the growing body of research indicating that intercultural communication training significantly improves psychological well-being, communication, and productivity. Numerous research reports have been compared and evaluated in three major studies (Black & Mendenhall, 1990; Deshpande & Viswesvaran, 1992; Kealey & Protheroe, 1996). Although Black and Mendenhall (1990) are cautious in stating that "the empirical literature gives guarded support to the proposition that cross-cultural training has a positive impact on cross-cultural effectiveness" (p. 120), Deshpande and Viswesvaran (1992) concluding a meta-analysis of 21 research studies that included 1,611 subjects state that intercultural communication training clearly is effective for all five criteria they surveyed: self-development, perception, relationship, performance, and adaptation. Kealey and Protheroe (1996) state that "the empirical support for the value of domestic multicultural training is quite strong and methodologically respectable" (p. 161). Although more research is needed regarding the effectiveness of intercultural preparedness training, the trend is clear: It improves and accelerates cultural adaptation.

Theoretical Framework

Adaptation to a culture becomes synonymous with successful communication within that culture (Gudykunst & Kim, 1984) because culture *is* communication (Hall, 1976). The point is that to successfully adapt to a culture means an individual can successfully communicate in that culture.

"With this in mind, some people say that if one knows the language, ones knows the culture, but knowing the language is more than knowing the words, tenses, and voices of a language and being able to speak it fluently. Jawaharlal Nehru emphasized that communication is not in the narrow sense of the *word*, but is language of the *mind*, that it is not the appeal to logic and reason, but is an *emotional awareness* of other people [cited in Adler, 1991]. Nehru's premise emphasizes that communication is verbal and nonverbal, that it is explicit and implicit, that it goes beyond words, gestures, and behaviors to encompass emotional awareness" (McFarland, 1997).

By definition, the term impatriates refers to international people who come into one's own culture to reside. Actually, those same impatriates to one's culture are also expatriates from their own cultures. Whether perceived as impatriates or expatriates, they are people who are sojourning in a system other than their own; therefore, much of the research of expatriates and expatriation applies to impatriates and impatriation, as well. The primary difference is (1) in the case of impatriates, the *host* culture is the observer of *foreign* employees in the domestic culture; whereas, in the case of expatriates, the *home* culture is the observer of *domestic* employees in a foreign culture, and (2) the differing perspectives of the organizations concerned with cultural adaptation of the employees: *host* perspective vs. *home* perspective.

Because the literature indicates that successful expatriation is based on the expatriate's cultural adaptation within that foreign system, which, in turn, is a function of communication, the theoretical framework for research previously had been built of communication, culture, and general systems theories (McFarland, 1996, 1997) and because impatriation is the counterpart of expatriation, the same theoretical framework was used for this study of impatriates.

Communication Theory. A basic communication model (cited in Adler, 1991) indicates that the message sent is never the same as the message received. The messages received by listeners/observers are decoded and filtered through their personal perspectives. Those perspectives are determined by their experiences, so all interpretations of communications are made through the lens of one's experiences. When the lenses are different, as they are between members of different cultures, interpretations are different; however, when awareness and sensitivity are heightened, the lenses of the message sender and the message recipient are more nearly aligned, and communication competence is heightened.

Hofstede's Theory of Cultural Dimensions. Hofstede's (1984, 1991) theory of cultural dimensions assists in characterizing, predicting, identifying, and interpreting general behavior within and among organizations. Hofstede's (1984) four cultural dimensions of (1) individualism versus collectivism, (2) power distance, (3) uncertainty avoidance, and (4) masculinity versus femininity stem from a six-year study in 50 cultures.

Individualism versus Collectivism. Individualism pertains to cultures and organizations in which the ties between individuals and between individuals and the organization are loose: Collectivism, on the opposite pole of this continuum, pertains to organizations in which people are integrated into strong, cohesive ingroups, which protect them in exchange for loyalty (Hofstede, 1984).

Power Distance. Power distance is the measure of the degree of inequality in organizations. It is defined as the extent to which the less powerful members of cultures and organizations expect and accept that power is distributed unequally (Hofstede, 1984, 1991).

Uncertainty Avoidance. Uncertainty avoidance is the extent to which a culture will go to avoid uncertainty and, thus, anxiety. The essence of uncertainty is that it is a subjective experience, a feeling that is acquired and learned. Feelings and ways of coping with them belong to cultural heritage, are reflected in collectively held values of members of a culture or organization, and lead to collective patterns of behavior (Hofstede, 1984).

Masculinity versus Femininity. The masculinity index refers to qualities that were historically associated with the male and the female genders. Some of these qualities are assertiveness, competition, and toughness for the male gender and nurturance, cooperation, and relationship-building for the female gender (Hofstede, 1984). These characteristics are pronounced in cultures and organizations.

General Systems Theory. General systems theory "[1] provides a perspective and vantage point for thinking about the organization. . . . [2] directs us to consider and influence the processes that are unique to self-aware systems. . . . and [3] helps us to adapt a big-picture view of development" (McLagan, 1989, pp. 78, 79). Cultural preparedness training is based on systems theory assumptions and focuses on the intercultural communication processes that take place when individuals from one culture interact with those of another culture (Gudykunst & Kim, 1992).

Research Methodology

This research is an interpretive study of impatriation of Catholic priests and sisters in the Upper Midwest United States and the role of their sponsoring, not-for-profit organization.

Informants. Names of the impatriate priests and sisters were suggested by the archdiocese office. All were contacted and all agreed to take part in the study. Ages of the informants ranged from the early thirties to the late forties. All had been in the upper Midwest at least one year. They originated from India, Nigeria, Uganda, Mexico, Ecuador, and Zaire.

Data Collection. As recommended by Spradley (1979), Dobbert (1989), and van Manen (1990), unstructured, audio-taped, face-to-face interviews were used to gather data and to provide detailed, expanded accounts in verbatim records.

Data Analysis. The following strategies for discovering themes by using linguistic symbols have been suggested by Spradley, Tesch, Dobbert, and van Manen (1979, 1987, 1989, 1990, respectively) and were used for thematic analysis in this study: transcription, highlighting, domain analysis, taxonomic analysis, and componential analysis. These are usual and accepted strategies, but due to limited space cannot be described in detail herein.

Findings and Interpretation

Impatriate priests and sisters report that impatriation is overwhelming, confusing, tiring, challenging, lonesome, and more difficult than expected. The findings of this study indicate that this large midwestern Catholic archdiocese is just beginning to recognize cultural adjustment problems among their international priests and sisters, are attempting to assess their needs, and are willing to assist them in the cultural adjustment process. Likewise, impatriates desire assistance with their impatriation, but failing to receive effective cultural and sometimes material support from their organization, strive to deal with the adjustment process themselves and to support each other. Often this method results in unnecessarily disconnected and prolonged attempts during which the impatriate priests and sisters suffer physically and emotionally and further segregate themselves from the dominant culture by congregating separately from the native priests; however, they have few options. Three metathemes emerged from the domain and componential analyses of the interview data.

The metathemes indicate that the concern of international priests and sisters lies predominantly and broadly in the areas of (1) social, interpersonal interactions and relationships, (2) cultural differences between their home cultures and their host culture, and (3) and their preparedness, or lack thereof, for working in the host culture. These are referenced herein as the Social, Cultural and Preparedness Factors and are addressed individually although, of course, there is overlap because culture is pervasive and all else occurs within a culture.

1. **Social Factor**: International priests and sisters, in general, desire more opportunities for favorable, positive social interactions by which they can become better acquainted with both international and national priests and sisters. They express that they are rarely introduced to the people of their new parishes/assignments and that they are frequently the object of rejection, power plays, and discrimination of various forms.
2. **Cultural Factor**: International priests and sisters acknowledge that differences between their home and host cultures create unexpected problems at both the national and organizational levels.

3. **Preparedness Factor**: International priests and sisters indicate that they are not prepared to live and work in the host culture or to adopt effectively the responsibilities of the host organization, partly because they do not have the required knowledge and skills, especially American English, and partly because they are not given information pertinent to their roles and responsibilities in the organization.

When the underlying meanings of behaviors are understood from a cultural perspective, one can more easily view them as behaviors that are not necessarily personal affronts to the observer, which helps to defuse uncomfortable or conflictive situations and make them more readily manageable. Table 1 presents Hofstede's (1980) cultural dimension scores for nations and areas represented in this study. Note, that the cultures represented have large power distance and upper-level masculinity scores that correspond with the culture of the Catholic church, suggesting that the priests and sisters would be likely to accept discipline, control, and hierarchy. However, the representative scores indicate that the informants are from collectivistic cultures, working in a very individualistic host culture and, in general, experience higher levels of uncertainty avoidance, both of which can lead to uncomfortable circumstances.

Table 1. Hofstede's Cultural Dimension Scores for Selected Nations or Areas

	Power Distance	Individualism	Masculinity	Uncertainty Avoidance
United States	40	91	62	46
India	77	48	56	40
Nigeria (Estimated)	80	30	60	55
*East Africa	64	27	41	52
Ecuador	78	8	63	67
Mexico	81	30	69	82

*Because Hofstede does not give scores for Uganda and Zaire, East Africa scores are depicted to indicate comparisons among the scores of some African nations. Likewise, the following quotes are attributed to Africa rather than the individual African nations.

Following are observations made by the impatriate priests and sisters as well as the cultural dimensions that aid in giving meaning to the observed behaviors. With each cultural dimension is the value assigned by Hofstede to the United States.

Uncertainty Avoidance (46). The uncertainty avoidance index of 46 falls near the midpoint of the continuum, indicating that the United States culture is not particularly anxious; however, there is potential for a low-to-medium level of anxiety.

> I was frightened about coming to America.--*Africa*
>
> I feel very uncomfortable. I don't feel at home.--*Mexico*
>
> I knew that I had to watch my step. I never took a step that I didn't call the Chancery and sort of get an OK before I'd go ahead.--*Africa*
>
> I really backed up. I didn't do anything. I left, looking for another assignment.
> --*Ecuador*

Power Distance Power distance is the measure of the degree of inequality in society. It is defined as the extent to which the less powerful members of institutions and organizations within a culture expect and accept that power is distributed unequally. Power distance is thus explained from the value systems of the less powerful members, but the way power is distributed is usually explained from the behavior of the more powerful members (Hofstede, 1984, 1991). The Catholic church is a very hierarchical organization with a large power distance.

> I was fired by him [the pastor]. When I asked why, he said, 'Well because I am your pastor and you are not obedient.'--Ecuador
>
> The former pastor was there four years and they were really afraid of him.--*Africa*
>
> The parish council chairperson has been in office for 25 years. He sees himself as above the priests.--*Africa*
>
> Everybody is looking for position, high position. They live in a political structure.--*Ecuador*

Masculinity/Femininity Although far from the highest masculinity index of 95 (attributed to Japan), a masculinity index of 62 is considered to be quite masculine, definitely not nurturing as associated with lower indices. Masculine indices are reflected in a lack of training and support within organizations. The Catholic church is a masculine society.

> The sisters live in a poor economic and educational environment. They obey, cook, and uphold the priests.--*Ecuador*
>
> The sisters are too rigidly scheduled to have time to talk to each other. They are scheduled from 6:30 a.m. until 8:30, sometimes 10:00, at night.--*Mexico*
>
> In Africa, I would be more interested in you, in making you feel at home, talking with you.--*Africa*
>
> A pastor told an international priest, 'You are here insofar as we profit from you. But when you are in trouble, I'm sorry, solve your own problem.'--*Africa*

Individualism/Collectivism (91). The United States has the highest individualism index of all the cultures investigated (Hofstede, 1984). The high value is reflected in everyday behaviors of individuals, whose focus is on oneself rather than other members of the group. Most intercultural communication problems occur within this dimension between the individualists and the collectivists. Ironically, the international priests and sisters are primarily collectivists, and the native priests and sisters are primarily individualists, creating innumerable opportunities for misperception, misinterpretation, and misunderstanding.

> It's difficult coming from a society where the family matters so much to a society where the individual matters most.--*Africa*
>
> Everybody here seems to be kind of isolated, individual. He is responsible for himself and he has no community to fall back on.--*India*
>
> Some individuals are so power hungry.--*Africa*

If the impatriate priests had had intercultural communication training that included a theoretical foundation for application and transfer of learning, they would have been able to predict and understand many of the behaviors they witnessed in their archdiocese. If members of the archdiocese had had intercultural communication training, they could have been aware of and sensitive to the needs of the impatriates who must adjust to the predominant host organizational and societal cultures.

Throughout the interviews, the informants presented many ideas for improving the cultural adjustment of international priests and sisters (see Table 2).

Table 2. International Priests and Sisters' Suggestions for Cultural Integration

Review Selection Criteria

- Require competence in English as a foreign language (speaking, reading, writing)
- Recruit for personality and ability to tolerate being alone
- Administer psychological or personality profiles to determine likelihood of adapting

Educate Host Population

- Familiarize with their own and the international priests' cultures (include geography)
- Improve interpersonal skills
- Reach out. Remember actions speak louder than words
- Increase knowledge of host priests regarding religions of world and various rites of Catholic church, which are practiced throughout the U.S. as well as the world

Educate International Priests and Sisters

- American English
- Cultural differences (include individualism, nonverbal communication, hygiene, etiquette)
- Immerse in host culture at least two months before beginning duties
- Send new priests to parishes for *practice* experience

Help to Ensure Their Acceptance

- Announce/introduce the new priest's arrival in advance
- Be sure priests, sisters, staff, etc. are aware of the need for the new priest
- Arrange meeting with parish council, staff, and new priest to discuss roles, to address questions
- Call gathering of priests, national and international, to meet new priest, to talk, to listen

Provide Psychological Support

- Assign a mentor or coach
- Place him in a support group immediately
- Connect him with the international community of priests
- Try to meet with them on a regular basis
- Try to reduce loneliness and isolation

Provide Technical Support

- Obtaining drivers training, drivers license, visas
- Acquiring legal and taxation counsel,
- Locating physicians, dentists
- Acquiring transportation needed to fulfill responsibilities
- Provide

Help to Ensure Their Success

- Provide bilingual resources
- Provide orientation programs
- Provide opportunities for and allow time for social activities/interactions
- Provide background information (positive and negative) and demographics on the assigned parish
- Be sure new priests understand they will be lonely and isolated

Conclusions and Future Directions for Research

The international priests and sisters acknowledge that they want and need intercultural communication training, but also request that their host colleagues have intercultural communication training. If both groups have training and increase their intercultural communication competence, interpersonal interactions between members of both groups should improve. A desire of the international priests and sisters is to have their opportunities for social interaction increase in number and quality, which could serve to reduce feelings of loneliness and isolation and improve relationships among the priests, between priests and their staffs, and among the sisters. Because the Catholic church trains, recruits, employs, and houses the priests and sisters within a somewhat closed community, they are in a position of greater responsibility to improve cultural adjustment and integration of international employees than most other organizations would be with their employees.

Because of the Church's significant responsibility in terms of its international priests and sisters and because of the vast desert land that this responsibility opens in terms of human resource development, this arena is ripe for future research. An obvious target is research of those national priests who have worked closely with international priests, for they may have reached the point of working with priests rather than with "foreigners." As a priest from Zaire stated, "I interact with other priests, even some Protestant pastors. I try to meet with them on a regular basis. It's the only way to know a person beyond the color of his skin or his origin."

References

Adler, N. J. (1991). International dimensions of organizational behavior. Boston: PWS-Kent.

Black, J. S. (1992). Coming home: The relationship of expatriate expectations with repatriation adjustment and job performance. *Human Relations 45*(2), 177-192.

Brislin, R. W. (1981). *Cross-cultural encounters: Face-to-face interaction.* Boston: Allyn and Bacon.

Conference Board. (1994a). *Chief executive opinion.* (The Conference Board Report No. 11.) New York: The Conference Board.

Conference Board. (1994b). *U.S. Manufacturers in the global marketplace: A research report.* (The Conference Board Report No. 1058-94-RR.) New York: The Conference Board.

Copeland, L. (1985). Cross-cultural training: the competitive edge. *Training, 22*(7), 49-51.

Copeland, L. (1990). International training. In R. L. Craig (Ed.), *Training and development handbook* (717-25). New York: McGraw-Hill.

Dobbert, M. (1982). Ethnographic research: Theory and application for modern schools and society. New York: Praeger Publishers.

Engen, J. R. (1995, March). Coming home. *Training.*

Gudykunst, W. B., & Kim, Y. Y. (1992). *Communicating with strangers (2nd ed.).* New York: McGraw-Hill.

Gudykunst, W. B., & Nishida, T. (1989). Theoretical perspectives for studying intercultural communication. In M. K. Asante & W. B. Gudykunst (Eds.) *Handbook of Intercultural and International Communication,* (17-46). Newbury Park, CA: Sage.

Guptara, P. (1990, November). The art of training abroad. *Training & Development Journal,* 13-17.

Hall, E. T. (1981). *Beyond culture.* New York: Anchor Books/Doubleday.

Hammer, M. R. (1989). Intercultural communication competence. In M. K. Asante & W. B. Gudykunst (Eds.) *Handbook of Intercultural and International Communication,* (17-46). Newbury Park, CA: Sage.

Hofstede, G. (1984). Culture's consequences: International differences in work-related values (2nd ed.). Newbury Park, CA: Sage.

Hofstede, G. (1991). *Cultures and organizations: Software of the mind.* New York: McGraw-Hill.

Kudirka, J. C. (1989). Cross-cultural communication in the workplace: Can we stay home without it? (Report No. CE 054 792). Washington, D.C.: Annual Conference of National Alliance of Business. (ERIC Document Reproduction Service No. Ed 319 897).

McFarland, J. R. (1995). The status of intercultural communication training in Fortune 500 manufacturing and service organizations. *Academy of Human Resource Development 1995 Conference Proceedings.* Austin, TX: AHRD.

McFarland, J. R. (1996). Perspectives of United States expatriates in the Netherlands, Belgium, and France on expatriation and the role of their sponsoring organization. *Academy of Human Resource Development 1996 Conference Proceedings*. Austin, TX: AHRD.

McFarland, J. R. (1997). An interpretive study of the perspectives of United States repatriates on repatriation and the role of their employers *Academy of Human Resource Development 1997 Conference Proceedings*. Austin, TX: AHRD.

McLagan, P. (1989). Systems model 2000: Matching systems theory to future HRD issues. In D. Gradous (Ed.) *Systems theory applied to human resource development*, 61-82.

Rohrlich, P. E. (1987). Why do we study intercultural communication? *International Journal of Intercultural Relations, 11*, 123-28.

Spradley, J. P. (1979). *The ethnographic interview*. New York: Harcourt, Brace, Jovanovich

Tesch, R. (1987). Emerging themes: The researcher's experience. *Phenomenology & Pedagogy*, 5(3), 230-241.

van Manen, M. (1990). *Researching lived experience*. New York: State University of New York Press.

Windham International, & National Foreign Trade Council. (1994). *Global relocation trends 1994 survey report*. New York: Windham International.

Constructing Diverse Workplace Communities: Using an Educational Attrition Model to Retain Managerial Employees of Color and Women

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Employee turnover, particularly that of women and employees of color, is problematic for organizations seeking to construct internally a diverse community. This paper examines the theoretical underpinnings of organizational models explaining employee turnover and an educational model explaining student attrition, introduces the Organizational Model of Managerial Employee Persistence, and establishes a foundation to empirically test the model and explore further the nature of turnover among managerial employees of color and women.

The workplace provides a rich environment for learning and productivity when employees, satisfied in their roles within the organization, are committed to continuing there. Organizations are challenged to develop a professional and productive workforce that will be globally competitive, and one which includes and supports diversity (Dominguez, 1991). Employee turnover, particularly that of women and employees of color, is problematic for organizations seeking to construct internally a diverse community representative of a workforce of the 21st Century.

Minorities and women hold fewer than five percent of the managerial positions in the 1000 largest corporations in the U.S. (Dominguez, 1991). Schwartz (as cited in Miller & Wheeler, 1992) noted that turnover among top performing female managers was two and a half times that of their male counterparts. The traditional explanation, explicit or implicit, has been that the women were less able. Except for some anecdotal documentation, the study of turnover among managerial employees of color is nonexistent.

Are managerial employees, particularly employees of color and women, more effectively retained when they are integrated into the professional, social, career, and extra-organizational systems of the organization? This paper offers a conceptual and unified model that integrates dimensions of organizational turnover and educational attrition. The presence or absence of an environment into which women and employees of color perceive that they are integrated and one which supports them in the career pathing process, is hypothesized to play a role in their retention. The objectives of this paper are to

- examine the theoretical underpinnings of organizational models explaining employee turnover and an educational model explaining student attrition;
- introduce the *Organizational Model of Managerial Employee Persistence*, a theoretical model that integrates turnover variables into an educational attrition model; and
- establish a foundation for conducting research to test the model and explore the nature of turnover of managerial employees of color and women.

Employee Turnover Models

There are a variety of employee turnover models which explain voluntarily leaving an organization (Bannister & Griffeth, 1986; Blau & Boal, 1989; Dalessio, Silverman, & Schuck, 1986; Dougherty, Bluedorn, & Keon, 1985; Hom, Griffeth, & Sellaro, 1984; Lee & Mitchell, 1994; Mobley, 1977; Mobley, Horner, & Hollingsworth, 1978; Steers & Mowday, 1981). According to Lee (1996), the most influential turnover theory among traditional turnover theories is Mobley's (1977) model describing linkages between job satisfaction and employee turnover. That model (Mobley, 1977; Mobley, Griffeth, Hand, & Meglino, 1979; Mobley, Horner, & Hollingsworth, 1978) theorized that job satisfaction led to thinking about quitting, which led to job searching, which led to an intention to quit, which led to eventual turnover. However, research on this traditional model (e.g., Hom, Griffeth, & Sellaro, 1984) has explained very little if any (0-5 percent) of the variance in turnover, with low correlations (.18 to .36) between various factors (e.g., search intention, dissatisfaction) and actual leaving.

Psychological, behavioral theories also have attempted to explain turnover. Hulin (1991) suggested that job withdrawal, job avoidance, and specific change behaviors were connected to

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turnover, while Lee and Mitchell (1994) developed a theory to explain voluntary turnover as impulsive or deliberate. Meta-analysis corroborated the Lee and Mitchell (1994) theory and model, but also found, through use of a structural equation model, that occupational differences moderated the paths (Hom, Caranikas-Walker, Prussia, & Griffeth, 1992). Dougherty, Bluedorn, and Keon (1985) suggested that the sequential path from satisfaction-to-commitment-to-intention is less explanatory than a model positing both job satisfaction and organizational commitment as exogenous variables leading directly to intention. Similarly, Tett and Meyer (1993) found that satisfaction and commitment were only moderately correlated constructs, and that each contributed independently to the prediction of intention.

The unfolding model of voluntary employee turnover (UNVET) proposed that employees move through decision paths, for the most part based on compatibility tests; this model focused not on attitude-driven (e.g., job dissatisfaction) turnover decisions found in previous models, but rather on turnover decisions initiated by good or bad "shocks" or events (Lee & Mitchell, 1991; Lee & Mitchell, 1994). Lee (1996) suggests that this UNVET model can be used by human resource development to advise managers on how to deal with various types of turnover, based on how valuable the employee is perceived to be (Hom & Griffeth, 1995):

Type of Turnover	Implication	Managerial Role
• Functional but avoidable	Employee is less valuable; Mgr. has some ability to affect quit decision	Actively encourage departure
• Dysfunctional and avoidable	Employee is valuable; Manager can affect quit decision	Actively discourage departure
• Functional but unavoidable	Employee is less valuable; Mgr. has minimal ability to affect quit decision	Take no action to encourage or discourage departure
• Dysfunctional and unavoidable	Employee is valuable; Mgr. cannot affect quit decision	Take no action to discourage departure, but act to minimize disruption both to the employee and the organization

Related to the literature on turnover, is literature on the employee socialization process, described in general as the process by which individuals are "broken in" as they enter an organization. Organizational socialization is thought to comprise three stages: Anticipatory socialization (prior to entry when expectations are developed), Entry (expectations may be disconfirmed, leading to stress, which may lead to turnover), and Adjustment (learning how to do the job and how to function in the social/cultural environment). Some outcomes of adjustment are thought to include job satisfaction, organizational commitment, and intention to remain.

Similar to research on turnover, much of the research on organizational socialization is focused on the individual employee. The employee is described in terms of feelings of power or control over the way work is carried out, and general satisfaction (Feldman, 1976), stress (Fisher, 1986), and attitudes and behaviors of the newcomer (Wanous & Colella, 1989). Interestingly, Feldman (1976) found socialization programs ineffective in affecting motivation to perform and job involvement. However, some of the research suggests an institutional accountability for socialization: The more institutionalized the socialization, the greater were job satisfaction and commitment, and lower was intention to quit (Jones, 1986), thus recognizing the need to consider both individual and institutional factors. How the organization tailors newcomers' socialization experiences may impact commitment (Allen & Meyer, 1990). According to Ostroff and Kozlowski (1992), co-workers play an important role-- both as role models and as sources of information. Furthermore, there is a need for resocialization when there are major job or organizational changes (Chao, O'Leary-Kelly, Wolf, Klein, & Gardner, 1994)

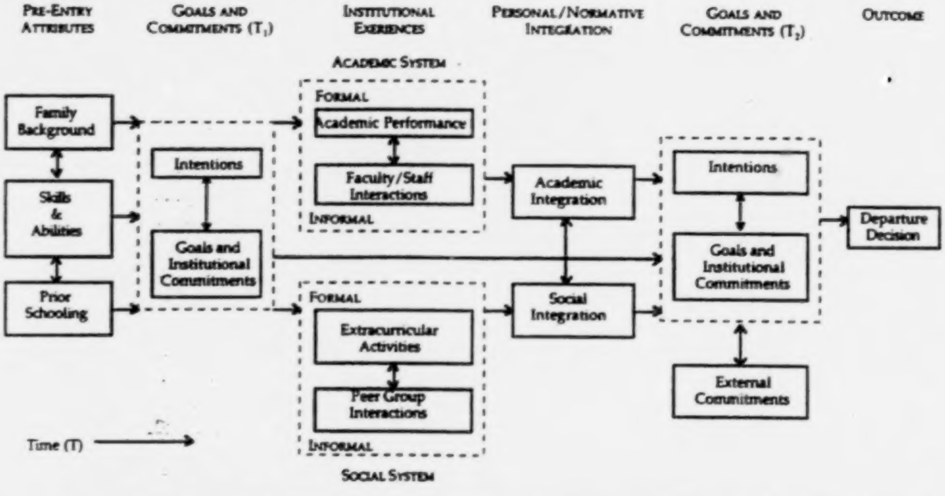
In summary, the constructs job satisfaction and organizational commitment have evolved to serve as the major conceptual underpinnings for much of the research on employee turnover as well as organizational socialization. It has been suggested that research on turnover continue to test models and incorporate study variables into future models (Cotton & Tuttle, 1986). Hom, Caranikas-Walker, Prussia, and Griffeth (1992) conclude that future meta-analytical research should consider new moderators, while Hom, Caranikas-Walker, Prussia, & Griffeth (1992) say it is premature to abandon existing theoretical turnover models, and thus call for better theory testing in addition to theorizing. Traditional turnover theories may be too narrowly focused, and new approaches are needed (Hom & Griffeth, 1995). Organizational socialization models seem to be broader in scope, but historically, organizational commitment and the departure decision, for the most part, are focused on the employee. Still, there is the suggestion that organizations also might have some impact on commitment and the subsequent decision to stay or leave (Allen & Meyer, 1990; Chao et al., 1994; Jones, 1986; Lee, 1996). Thus there is some support for a broader approach to include institutional influences as well as individual employee attributes.

Longitudinal Model of Institutional Departure

The Longitudinal Model of Institutional Departure (Tinto, 1993), also is a model of voluntary departure, but framed within the context of an educational institution. This model offers a theoretical base for explaining students' decisions to persist in or depart from their chosen institution, and explains student attrition as a longitudinal process focused on integration and commitment as the key determinants of persistence.

According to Tinto (1993) (see Figure 1), students' background characteristics (family background, individual attributes, and pre-college schooling) interact with each other and influence students' initial commitment to the goal of college completion (goal commitment) and initial commitment to their institution of higher learning (institutional commitment). These initial commitments and characteristics influence students' intellectual development and academic performance, which determine academic integration. Social integration is defined by factors such as relationships with peers, informal contacts with faculty, and collective affiliations through clubs or other school activities. The model asserts that students' perceptions of their social and academic integration are predominant influences in their decision to persist in or depart from the institution.

Figure 1. A model of institutional departure (Tinto, 1975, 1987).

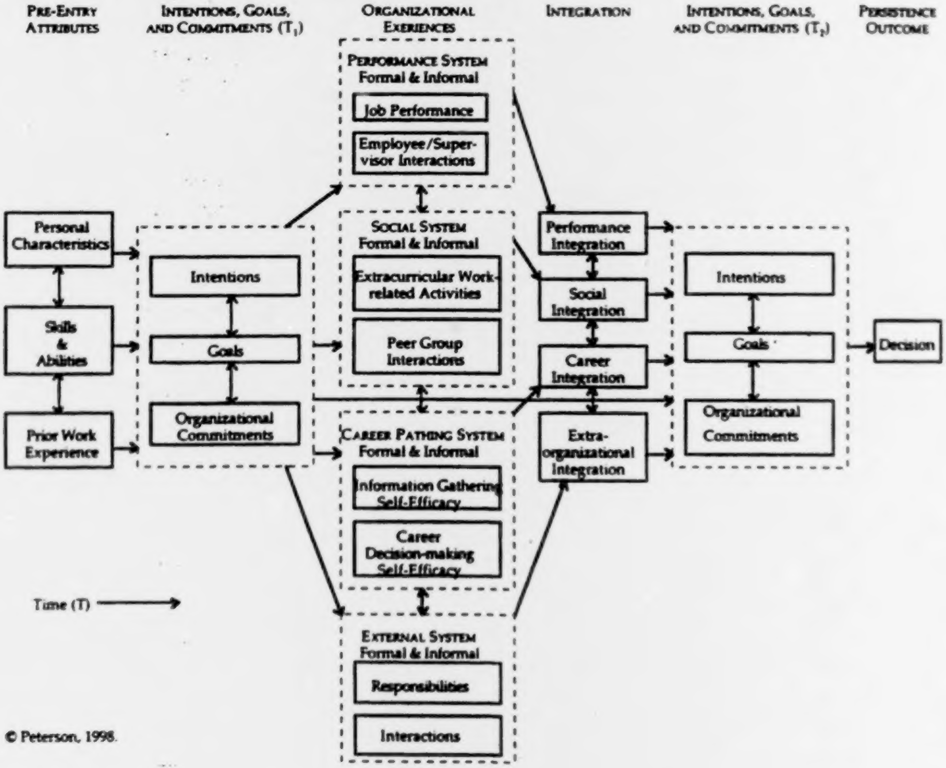

Pre-Entry Attributes
Goals and Commitments (T1)
Institutional Experiences
Personal/Normative Integration
Goals and Commitments (T2)
Outcome
Academic System
Formal
Academic Performance
Faculty/Staff Interactions
Informal
Family Background
Skills & Abilities
Prior Schooling
Intentions
Goals and Institutional Commitments
Academic Integration
Social Integration
Intentions
Goals and Institutional Commitments
External Commitments
Departure Decision
Formal
Extracurricular Activities
Peer Group Interactions
Informal
Social System
Time (T)

Working within the theoretical framework of the Tinto (1987) model, Peterson (1993a) found a relationship between both social and academic integration and an added variable, Career Decision-Making Self-Efficacy (CDMSE). CDMSE identifies the extent to which students have confidence (self-efficacy) in their ability to engage in educational and occupational planning and decision-making. Of all the background characteristics, only career decision-making self-efficacy contributed significantly to the variance in the social and academic integration of underprepared students (Peterson, 1993a). In addition, CDMSE and its relationship with measures of integration varied with respect to ethnicity and age (Peterson, 1993b). Building on that relationship between CDMSE and integration, Peterson and delMas (1996) constructed a path model mapping the effect of CDMSE on persistence and found that the model accounted for 27 percent of the variance in student persistence and 21 percent of the variance in intent to persist.

An Organizational Model of Managerial Employee Persistence

Given the relative strength of the educational model described above to explain the variance in student persistence compared to the ability of turnover models to explain employee turnover, the construction of an integrated model which combined key variables of both and subsequent development of a theoretical foundation to explain employee persistence was the first stage of this research. The second stage is to operationalize and test the model. This paper addresses the first stage by introducing an *Organizational Model of Managerial Employee Persistence* (see figure 2). This integrated model, while not ignoring individual attributes of the employee, focuses on the role of the organization in integrating employees into the performance, social, and career pathing systems of the organization, as well as acknowledging the holistic impact of the external system on those internal systems.

Figure 2. Organizational model of managerial employee persistence.


PRE-ENTRY ATTRIBUTES
INTENTIONS, GOALS, AND COMMITMENTS (T_1)
ORGANIZATIONAL EXERIENCES
INTEGRATION
INTENTIONS, GOALS, AND COMMITMENTS (T_2)
PERSISTENCE OUTCOME
PERFORMANCE SYSTEM Formal & Informal
Job Performance
Employee/Supervisor Interactions
Personal Characteristics
Skills & Abilities
Prior Work Experience
Intentions
Goals
Organizational Commitments
SOCIAL SYSTEM Formal & Informal
Extracurricular Work-related Activities
Peer Group Interactions
CAREER PATHING SYSTEM Formal & Informal
Information Gathering Self-Efficacy
Career Decision-making Self-Efficacy
EXTERNAL SYSTEM Formal & Informal
Responsibilities
Interactions
Performance Integration
Social Integration
Career Integration
Extra-organizational Integration
Intentions
Goals
Organizational Commitments
Decision
Time (T)

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Pre-Entry Attributes. Pre-Entry Attributes are represented by three major categories: Personal Characteristics, Skills and Abilities, and Prior Work Experience. Personal Characteristics include demographic variables such as age, gender, race, and family. Skills and Abilities include both the behavioral and the cognitive, such as critical thinking and motivation, and also are represented by educational and professional preparation and areas of study. Prior Work Experience includes experience at various managerial levels both within and outside the organization.

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Initial Intentions, Goals, and Commitments. These variables are measured twice, once at entry as a newcomer to the organization or the job, and then again after a period of time (e.g., six months, one year, upon leaving). Initial Intentions represent the employees' intent to stay with the organization. Goals identify the degree to which the goals and values of the individual "fit" with the goals and values of the organization. Commitments represent the motivation and effort the employee expects to exert to achieve organizational goals (job involvement) and to enhance his/her professional development.

Organizational Experiences. In the academic model, Institutional Experiences have the greatest impact on student persistence because those experiences identify the extent to which students become integrated into the social and academic systems of the educational institution. Similarly, Organizational Experiences are hypothesized in this model to have the greatest impact on employees' decisions to persist or withdraw from the organization because of the role of those experiences in contributing to organizational integration.

Each of the systems and dimensions of the systems operate both formally and informally. Formal systems imply dimensions that have been institutionalized, (e.g., performance evaluations, committee memberships, succession planning). Informal systems imply accidental or non-institutionalized dimensions.

The organizational systems are represented by the following:

- The Performance System: Organizational experiences that positively impact Job Performance and Employee/Supervisor Interactions lead to Performance Integration. Key factors include stress and conflict management, supervisory support, knowledge of job requirements, and job involvement.
- The Social System: Organizational experiences that impact Extracurricular Work-related Activities (e.g., committee membership, organizational social events) and Peer Group Interactions (work or non-work related) lead to Social Integration.
- The Career-Pathing System: Organizational experiences that impact Information Gathering Self-Efficacy and Career Decision-Making Self-Efficacy lead to Career Integration. Employees' confidence in their ability to engage in information-gathering and decision-making have been found to be the most salient dimensions of career self-efficacy.
- The External System: Organizational experiences that impact Responsibilities and Interactions externally lead to Extra-organizational Integration. External responsibilities can be to family, friends, religious or spiritual affiliations, the military, or educational endeavors. How well the organization supports the employee in interactions with these external groups are key variables in shaping the employee's perceptions of "fit" with the organization.

Integration. The extent and quality of the employees' organizational experiences is hypothesized to determine the degree of Organizational Integration. Performance Integration refers to the degree of organizational "fit" or congruence between the needs, interests, and preferences of the employee and those of the organization developed through experiences that lead to higher levels of performance and interactions with one's supervisor.

Social Integration refers to the degree of organizational "fit" or congruence between the needs, interests, and preferences of the employee and those of the organization developed through extracurricular work-related activities and interactions with peers. Career Integration refers to the degree of organizational "fit" or congruence between the needs, interests, and preferences of the employee and those of the organization developed through experiences that lead to greater self-efficacy in gathering information and making decisions about various career paths within the organization. Extra-organizational Integration refers to the degree of organizational "fit" or congruence between the needs, interests, and preferences of the employee in his/her work role and those of his/her myriad roles outside the organization.

Developed Intentions, Goals, and Commitments. Just as employees' intentions, goals, and commitments previously impacted their sense of integration, over time, their perception of the degree of integration now impacts their developed intentions, goals, and commitments. In some path models of student attrition, it is the developed intention variable that has the greatest predictive power of attrition.

Persistence Outcome. Employees make one of two decisions-- to stay or to leave-- with myriad variations and degrees of commitment.

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Comparison of Models

The *Organizational Model of Managerial Employee Persistence* has incorporated dimensions represented in employee turnover models, organizational socialization models, and educational models. The key variables in turnover and organizational socialization models-- job satisfaction and organizational commitment-- merely have been reframed.

The concept of organizational socialization is comparable to the concept of integration; both terms describe the extent to which individuals perceive a sense of "fit" or connectedness with their organizations. Developed intentions, goals, and commitments indicative of a decision to persist could be considered the manifestation of job satisfaction; i.e., if organizational integration (the perception of organizational "fit" within the organization together with a perception that the organization is responsive to ones' life outside the organization) leads to compatibility of goals, an intention to stay, and a commitment to the organization, there may be some level of job satisfaction inherent in the decision to persist. But satisfaction is not likely the root variable; it could be organizational behaviors that contribute to an employee's sense of "fit" and integration, together with personal characteristics, which holistically frame an individual's sense of satisfaction. According to Chao, O'Leary-Kelly, Wolf, Klein, & Gardner (1994), a perceived mismatch between the individual's and organization's goals and values may be the impetus for organizational withdrawal.

Commitment is not static; it can change over time. In this model, like each of the other models, commitment is thought to play a significant role in persistence. This model, however, suggests that developed intentions, goals, and commitments are a function of what the organization does to the individual after he or she arrives. Thus, the gist of the *Organizational Model of Managerial Employee Persistence* is that it leans less heavily on persistence being a function of individual attitudes, predisposition, and personality, and more a function of what goes on in the organization to foster a sense of community and fit.

Conclusions

The *Organizational Model of Managerial Employee Persistence* provides a unifying framework to study a complex issue. Employees' decisions, particularly those of women and employees of color, to persist in or depart from their organization may be indications of their perceptions of the presence of absence of an environment which contributes to their sense of integration with the organization-- their sense of "fit." Each employee brings a unique set of needs to the organization and seeks integration in an individual way. The crux of the linkage between job satisfaction, organizational commitment, and employee turnover is whether or not the environment fosters performance, social, career, and extra-organizational integration. That hypothesized linkage is an empirically testable proposition.

Researchable questions to test the *Organizational Model of Managerial Employee Persistence* include the following:

1. Is there a relationship between employees' integration into the Professional, Social, Career, and External Systems of an organization, and their developed intentions, goals, and commitment toward staying?
2. What is the role of the organizational in fostering that integration?
3. To what extent do managerial employees' perceptions of their performance, social, career, and extra-organizational integration contribute to the variance, if any, in turnover?
4. What processes (e.g., career planning, employee development, networking, and mentoring programs) do managerial employees, particularly women and employees of color associate with job satisfaction and integration? Do middle and supervisory managerial employees' perceptions of job satisfaction and integration match those of top managers. Is integration a manifestation of job satisfaction?
5. How do perceptions of integration differ among and between managerial women and employees of color who persist and those who leave? Between managerial women and employees of color and Caucasian men?
6. In addition, the role of the organization in turnover decisions might be approached from the richness of a critical or interpretive perspective to assess common themes and fundamental elements. In turn, these themes and elements should suggest areas for additional inquiry.

The *Organizational Model of Managerial Employee Persistence* model contributes to new knowledge in Human Resource Development in the following ways: This model (1) integrates theoretical turnover models, organizational socialization models, and educational attrition models, (2) considers new moderators and reconfigures old, (3) approaches the problem from a theoretical perspective that focuses on *retaining* employees rather than explaining the *turnover* of employees, (4) is sensitive to managerial employees of color and women, and (5) addresses the call for better theory testing in addition to theorizing.

The *Organizational Model of Managerial Employee Persistence* needs to be operationalized and tested-- the next stage of this research. Substantive data, collected and analyzed over time, that examine the link between employee turnover, particularly that of managerial employees of color and women, and organizational processes, are needed. The result could be organizational processes that facilitate individual development in order to construct diverse workplace communities.

References

Allen, N., & Meyer, J. (1990). Organizational socialization tactics: A longitudinal analysis of links to newcomers' commitment and role orientation. Academy of Management Journal, 33(4), 847-858.

Bannister, B., & Griffeth, R. (1986). Applying a causal analytic framework to the Mobley, Horner, and Hollingsworth (1978) turnover model: A useful reexamination. Journal of Management, 12(3), 433-443.

Blau, G., & Boal, K. (1989). Using job involvement and organizational commitment interactively to predict turnover. Journal of Management, 15(1), 115-127.

Chao, G., O'Leary-Kelly, A., Wolf, S., Klein, H., & Gardner, P. (1994). Organizational socialization: Its content and consequences. Journal of Applied Psychology, 79(5), 730-743.

Cotton, J., & Tuttle, J. (1986). Employee turnover: A meta-analytsis and review with implications for research. Academy of Management, 11(1), 55-70.

Dalessio, A., Silverman, W., & Schuck, J. (1986). Paths to turnover: A re-analysis and review of existing data on the Mobley, Horner, and Hollingsworth turnover model. Human Relations, 39(3), 245-263.

Dominguez, C. (1991, Nov., November 1991). The glass ceiling and workforce 2000. Labor Law Journal, 715-717.

Dougherty, T., Bluedorn, A., & Keon, T. (1985). Precursors of employee turnover: A multiple-sample causal analysis. Journal of Occupational Behavior, 6, 259-271.

Feldman, D. (1976). A contingency theory of socialization. Administrative Science Quarterly, 21, 433-452.

Fisher, C. (1985). Social support and adjustment to work: A longitudinal study. Journal of Management, 11(3), 39-53.

Fisher, C. (1986). Organizational socialization: An integrative review. Research in personnel and Human Resource Management, 4, 101-145.

Hom, P., Caranikas-Walker, F., Prussia, G., & Griffeth, R. (1992). A meta-analytical structural equations analysis of a model of employee turnover. Journal of Applied Psychology, 77(6), 890-909.

Hom, P., & Griffeth, R. (1995). Employee turnover. Cincinnati: Southwestern.

Hom, P., Griffeth, R., & Sellaro, L. (1984). The validity of Mobley's (1977) model of employee turnover. Organizational Behavior and Human Performance, 34, 141-174.

Hulin, C. (1991). Adaptation, persistence, and commitment in organizations. In M. Dunnette & L. Hough (Eds.), Handbook of industrial and organizational psychology (Vol. 2, pp. 445-505).

Jones, G. (1986). Socialization tactics, self-efficacy, and newcomers' adjustments to organizations. Academy of Management Journal, 29(2), 262-279.

Lee, T. (1996). Why employees quit. In L. Beach (Ed.), Decision Making in the Workplace (pp. 73-90). Mahwah, NJ: Lawrence Erlbaum Associates.

Lee, T., & Mitchell, T. (1991). The unfolding effects of organizational commitment and anticipated job satisfaction on voluntary employee turnover. Motivation and Emotion, 15, 99-121.

Lee, T., & Mitchell, T. (1994). An alternative approach: The unfolding model of voluntary employee turnover. *1994, 19*(1), 51-89.

Miller, J., & Wheeler, K. (1992). Unraveling the mysteries of gender differences in intentions to leave the organization. *Journal of Organizational Behavior, 13*, 465-478.

Mobley, W. (1977). Intermediate linkages in the relationship between job satisfaction and employee turnover. *Journal of Applied Psychology, 62*, 237-240.

Mobley, W., Griffeth, H., Hand, H., & Meglino, B. (1979). Review and conceptual analysis of the employee turnover process. *Psychological Bulletin, 86*(3), 493-522.

Mobley, W., Horner, S., & Hollingsworth, A. (1978). An evaluation of precursors of hospital employee turnover. *Journal of Applied Psychology, 63*(4), 408-414.

Ostroff, C., & Kozlowski, S. (1992). Organizational socialization as a learning process: The role of information acquisition. *Personnel Psychology, 45*, 849-874.

Peterson, S. (1993a). Career decision-making self-efficacy and institutional integration of underprepared college students. *Research in Higher Education, 34*(6), 659-685.

Peterson, S. (1993b). Career decision-making self-efficacy and social and academic integration of underprepared college students: Variations based on background characteristics. *Journal of Vocational Education Research, 18*(1), 77-115.

Peterson, S., & delMas, R. (1996, April,). *Effects of career decision-making self-efficacy on the retention of underprepared adults: A path-analytic study of student persistence.* Paper presented at the Annual Meeting of the American Educational Research Association, New York.

Steers, R., & Mowday, R. (1981). Employee turnover and post-decision accommodation processes. *Research in Organizational Behavior, 3*, 235-281.

Tett, R., & Meyer, J. (1993). Job satisfaction, organizational commitment, turnover intention, and turnover: Path analyses based on meta-analytic findings. *Personnel Psychology, 46*(2), 259-293.

Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition*. (Second ed.). Chicago: University of Chicago Press.

Wanous, J., & Colella, A. (1989). Organizational entry research: Current status and future directions. *Research in Personnel and Human Resources Management, 7*, 59-120.

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A Conceptual Framework of Learning for Native American Adult Learners

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The purpose of this research was to assess, analyze, and synthesize the ways in which Native American adult learners approach learning situations. Specifically, it attempted to propose a conceptual framework of learning for use in designing, developing, and executing formal educational experiences for Native American adult learners. This study is based on an assessment of Native American adult learning styles from community college and university settings representing tribes from across the U.S. and Canada.

The field of adult and continuing education is characterized by a unique multitude of programs, agencies, and personnel working for the purpose of assisting adults in their various learning activities. This precise focus on adults as learners is the cohesive force behind the unity of an otherwise extraordinarily diverse field. In addition, it is the nature of adults as learners and the distinguishing characteristics of the adult learning process that differentiates adult education from other kinds of education (Merriam & Caffarella, 1991).

According to both Curry (1983) and Bonham (1988a), the past several years have seen an increased interest in learning styles research as it relates to education in general and to the education professions in particular. Researchers support the need to better understand the learning style of the student.

Kiernan (1979) states that educators have only recently begun to realize that educational improvement is based on an understanding of the way students learn, and the assessment of learning style is one of the keys to an understanding of student learning. According to Donald (1985), "until we understand how our students learn, we cannot really suppose ourselves to be experts in our disciplines. . ." (p. 18). Korhonen and McCall (1986) argue that the determination of student learning style provides the instructor with valuable information that is needed to plan activities and methods that will assist students in the learning process. Griggs and Dunn (1989) as well as Potter and Emanuel (1990) verify that increased student academic achievement resulted when students were taught with instructional strategies that complemented their learning style preferences. Finally, Keefe and Ferrell (1990) report that learning style assessment can be used as the basis for more personalized student advisement and placement, instructional strategy, and evaluation of learning.

Statement of the Problem

The problem addressed by this study is defined by two specific limitations found in the current adult learning styles research. These include (1) the need for additional learning styles research with minority populations and (2) the need for theoretical models of learning for use in designing formal educational experiences for adult learners of different cultures, particularly Native Americans.

Learning Styles Research and the Cross-Cultural Learner. Bonham (1988b) argues that the previous research on learning styles has failed to control for variables such as cultural background and gender. In addition, Sanders and Wiseman (1990) report that the demography of our classrooms is becoming increasing multicultural; therefore, a greater sensitivity to the needs and learning styles of various ethnic groups is becoming more critical. Ross-Gordon (1991) calls for a multicultural perspective on learning, stating that while theoretical frameworks of learning do exist, they are often inappropriate for studying minority adults. Furthermore, she states that any differences found using these models may actually promote views of learning deficiency. Specifically, "studies focusing on specific minority groups need to be conducted, with attention to intragroup differences and their relationships to class and gender" (p. 12).

Theoretical Models of Learning for Native American Education. Educators and HRD professionals working with Native Americans lack theoretical models by which to design and execute educational experiences for these learners. McShane and Plas (1982) report that the typical curriculum for Native American learners continues to be a majority culture curriculum which tends to plan to the weaknesses rather than the strengths of these learners.

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Rhodes (1988, 1990) reports that while research has indicated that Native American students learn and mentally function in somewhat different ways than do Anglo students, little has been developed to implement a different learning/teaching methodology. He recommends specific teaching strategies be developed, tried, and analyzed to determine their success based on research in learning style.

McCarty, Wallace, Lynch, and Benally (1991) argue that many of the supported models of learning distort explanations of minority school performance. Consequently, this contributes to the educational and social disenfranchisement of the Native American and minority populations they purport to describe. They argue that these serious generalizations, based on the supported models, continue to receive uncritical attention by scholars and practitioners in the field. Finally, Hadfield, Martin, and Wooden (1992) report that learning style research would be useful in improving deficiencies of Native American learners by identifying a possible relationship between learning style and either achievement or anxiety.

Purpose of the Study

The purpose of this study was to assess, analyze, and synthesize the ways in which Native American adult learners approach learning situations. Specifically, it attempted to propose a conceptual framework of learning for use in designing, developing, and executing formal educational experiences for Native American adult learners.

Research Question. This study was guided by the following research question:

1. How do Native American adult learners approach learning situations?

Significance of the Study. The significance of the study was grounded in part in the researcher's own ethnic background. The researcher is an enrolled tribal member of the Pueblo of Laguna located in central New Mexico. As Osborne (1985) states:

> Native American researchers could do much to provide emic research from within their own cultures. It is unfortunate that as yet few have turned their hands to studies of cognition and that few have been involved as assistants on research projects (p. 20).

It has been as a Native American student and from working with other Native Americans in educational settings that the researcher desired to go beyond simply assessing learning style to proposing a conceptual framework of learning which could be used to improve educational experiences for these learners. While Native Americans have distinct ways of learning, little has been done with respect to the design and delivery of educational experiences based on this information.

Finally, researchers have clearly shown that a theoretical model of learning for Native Americans does not exist. The overall goal of this study was to propose a new conceptual framework of learning for Native American adult learners.

Theoretical Framework

Curry's (1990b) Theoretical Model of Learning Style Components and Effects served as the conceptual theoretical framework for this study. She submits that there are three constructs that influence learning styles and/or success in academic tasks. These include maintenance of motivation, level of task engagement, and specific information processing habits (cognitive control functions).

According to Curry (1990b, 1991), motivational levels are maintained once the learner establishes preferred environmental and social conditions for learning. Factors contributing to motivation include a general sense of self-efficacy (the belief in one's ability to perform a specific task) and self-control.

The 'engagement level' is defined as "the point of contact between the motivational condition of the learner entering the learning situation and the active processing work required by the new learning task" (Curry, 1991, p. 251). The level of engagement in the intended learning behavior is influenced by the learner's prior history with learning situations similar to the new one encountered (Curry, 1990b, 1991). A learner's level of task engagement is reflected in the amount of attention that is paid to features in the instructional situation, how persistent the learner will be, the degree of participation, the enthusiasm, and degree of concentration the learner sustains throughout and beyond the instructional situation.

Cognitive controls refer to the information processing habits or control systems that learners bring to learning situations (Curry, 1990b). These cognitive controls take place only after the learner is motivated and engaged in the task.

This model of learning style presents a way in which to link learner motivation, task engagement, and cognitive control. "The suggested connection is that engagement implies intention and willingness to stay focused on a particular learning task in a particular learning situation" (Curry, 1991, p. 252). Motivation must be maintained in order to keep this connection between the three components maintained. The level of task engagement permits information processing with whatever level of cognitive control the learner has mastered and become accustomed. Learning style itself, therefore, can be thought of as the combination of the learner's motivation, task engagement, and information processing habits.

Design and Procedures

Subjects. The sample for the study consisted of 206 Native American students from university and community college settings throughout New Mexico. Out of the 199 valid cases, 53% (N = 105) were male and 47% (N = 94) were female. The sample represented 35 different academic majors. In addition, 49 different U.S. and Canadian Indian tribes were represented by the sample with 99 subjects reporting membership in two or more tribes.

Learning Style Instruments. A total of nine instruments were used to assess the learning styles of the Native American adult learners--three instruments at each level. The purpose of the three instruments at each level was to increase validity of the results through triangulation of the data. All instruments were found to have sufficient psychometric ratings for accurately assessing learning style (Curry, 1983, 1987).

The three instruments selected to measure "Maintenance of Motivation" included the IPQ, SLSS, and LPI. The Friedman and Stritter (1976) *Instructional Preference Questionnaire (IPQ)* assesses a learner's preference for pacing, influence over the learning experience, use of media, active role in learning, and feedback in the learning process. The Riechmann and Grasha (1974) *Student Learning Style Scale (SLSS)* assesses how students interact socially with the teacher, other students, and the learning task. The Rezler and Rezmovic (1981) *Learning Preference Inventory (LPI)* assesses learners on three bipolar concepts: abstract vs. concrete, individual vs. interpersonal, and student structure vs. teacher structure.

The three instruments selected to measure "Level of Task Engagement" included the MFFT, ILP, and LASSI. The Kagan (1964) *Matching Familiar Figures Test (MFFT)* reports differences in learning style on a bipolar scale of reflectivity vs. impulsivity. The Schmeck, Ribich, and Ramanaiah (1977) *Inventory of Learning Processes (ILP)* examines everyday learning including deep processing, study methods, fact retention, and elaborative processing. The Weinstein (1987) *Learning and Study Strategies Inventory (LASSI)* assesses students' levels and use of anxiety, attitude, concentration, information processing, motivation, scheduling, selecting the main idea, self-testing, study aides, and test strategies.

Finally, the three instruments selected to measure the "Cognitive Control Functions" included the LSI, MBTI, and GEFT. The Kolb (1985) *Learning Style Inventory (LSI)* organizes learning style into two bipolar concepts: concrete experience vs. reflective observation, and abstract conceptualization vs. active experimentation. Myers-Briggs (1962) *Type Indicator (MBTI)* measures the constructs in Jung's theory of personality types: extraversion vs. introversion, sensing vs. intuition, thinking vs. feelings and judgment vs. perception. The Witkin, Oltman, Raskin, and Karp (1971) *Group Embedded Figures Test (GEFT)* measures the degree of field dependent-independent (global vs. analytical) thinking.

Data Collection. Data collection occurred through several three-hour sessions at the various sites throughout the spring, summer, and fall semesters of one calendar year. During the initial contact with each group of subjects, written consent was secured and demographic information obtained. A detailed explanation of the study was provided by the researcher as well. Subjects were guaranteed anonymity and confidentiality as part of their participation in the study.

All instruments received subject codes prior to the start of data collection. The instruments were randomized using a Greco-Latin Square design to ensure that the non-essential test order effect was randomly distributed across subjects.

Methods of Analysis. The data were analyzed using descriptive statistics. In addition, the multivariate analysis of multidimensional scaling was used in identifying the components of the conceptual framework. Fitzgerald and Hubert (1987) report that multidimensional scaling is a set of procedures which spatially represent the interrelations among a set of objects.

Results

Choosing the number of dimensions necessary to represent the data was determined by examining the stress (goodness-of-fit) value of a given dimension. Goodness-of-fit is rated as 'perfect' with 0% stress, 'excellent' with 2.5% stress, 'good' with 5% stress, 'fair' with 10% stress, and 'poor' with 20% stress (Kruskal 1964a cited in Everitt & Dunn, 1991; Fitzgerald & Hubert, 1987).

Motivation Maintenance. The two dimension MDS analysis for the motivation of maintenance level had a 'fair' goodness-of-fit at 9% stress. The stress and squared correlation (RSQ) for this scale accounted for 97% of the variance in this data set.

For this scale, the horizontal axis (dimension 1) was labeled *Environmental Factors* (negative to positive). The vertical axis (dimension 2) was labeled *Environmental Structure* (positive to negative). Dimension 1 defines the variables of the different learning environments. Dimension 2 defines who structures the actual learning environment.

Task Engagement. The two dimension MDS analysis for the task engagement level had 'good' goodness-of-fit at 6% stress. The RSQ for this scale accounted for 99% of the variance in this data set.

For this particular scale, the horizontal axis (dimension 1) was labeled *Strategy Type*. The vertical axis (dimension 2) was labeled *Frequency of Use*. Dimension 1 identifies the concrete and abstract study strategies (negative to positive). Dimension 2 identifies high to low frequency of use of the study strategies (positive to negative).

Cognitive Controls. The two dimension MDS analysis for the cognitive controls level had 'relatively good' goodness-of-fit at 8% stress. The RSQ for this scale accounted for 98% of the variance in this data set.

For this scale, the horizontal axis (dimension 1) was labeled *Internal Cognitive Strategies*. The vertical axis (dimension 2) was labeled *Internal Personality Strategies*. Dimension 1 identifies those cognitive strategies which are used for information processing. Dimension 2 identifies those personality variables which influence information processing. As with the MDS at the Task Engagement level, the higher the number indicates higher frequency of use. These data have been assembled and organized into a visual model or framework. The framework is found in Figure 1.

Discussion and Implications

This framework is based on the results from the descriptive (Aragon, 1996) analyses as well as the multidimensional scales. Keeping with Curry's (1983, 1991) notion that learning style is comprised of three distinct components, the learning preferences for Native Americans have been organized in the same way. The three 'stages' have been labeled 'Learning Environment and Component Preferences,' 'Approach to Task,' and 'Information Processing.'

The idea behind this framework is that student preferences at each stage must be established in order for learning to occur. The stages are structured in such a way that they build on each other. In other words, there is a clear, linear relationship between each stage. To describe the model using a manufacturing metaphor, the idea is that students come to class with under developed or 'raw' knowledge, skills, and abilities. The first step or stage involves establishing a learning environment which includes preferred elements or components.

For the Native American adult learner, this environment is teacher-structured - 'Learning Environment and Component Preferences.' The preferred components for this environment are feedback, participation, and dependence. In other words, the environment must provide feedback to the students on their progress, allow them to participate in class activities, and be dependent on someone other than themselves for the content and structure. Once the learning environment is properly established, students engage their approach to learning the task. Therefore, instructors should structure the curriculum for the Native American students.

At the 'Approach to Task' stage, students will use both concrete and abstract learning strategies. According to the framework, Native American students will approach a task using the concrete strategies of information processing, self-testing, and study aids. They will also approach a task using the abstract

Conceptual Framework of Native American Learning Style and Learning Stages

INPUT--------> Learning Environment --------> Approach to Task--------> Information Processing--------> OUTPUT

& Component Preferences

		High: Feedback Participant Dependent	Concrete Strategies (Reflective)	Information Processing. Self-Testing Study Aids	Internal Cognitive Strategies	Reflective Observation Abstract Conceptualization	
INPUT------> Knowledge Skills Abilities	Teacher Structure	**Medium:** Independent Influence Media		Methodical Study		Judgment Thinking	**OUTPUT:** Learning: Behavioral Change & Experience
		Low: Competitive Active Role Avoidant	Abstract Strategies (Reflective)	Elaborative Processing Fact Retention	Internal Personality Strategies	Introvert Sensing	

Figure 1

Conceptual Framework of Native American Learning Style and Learning Stages

strategies of methodical study, elaborative processing, and fact retention. They utilize both types of strategies in a reflective manner (Aragon, 1996). However, it is not clear from this research what types of learning strategies are used with various types of learning tasks.

Provided that the needs of the environment have been met and engagement to task has occurred, students move on to the higher stage of 'Information Processing.' For these students, information processing is defined as an internal process, drawing from both cognition and personality. The idea is that both cognitive and personality strategies are being used.

For Native American students, this combination involves thinking and watching. Based on the descriptive analyses, no clear differences were found between global and analytical thinking processes (Aragon, 1996). This suggests that Native American learners may equally be able to use their global and analytical cognitive processing abilities. Where appropriate and possible, instructors would probably do well to demonstrate or discuss an entire process, concept, or idea with these students and then go back and give attention to each step. This allows these students to see the whole picture (global) as well as learn each step that goes into the process (analytical).

Conclusion

It is clear from this study that Native American adult learners do have distinct preferences for learning. It appears that the challenge for educators and HRD professionals, who work with Native American adult learners, is to design their courses and methods of delivery to help increase successful learning. This study begins to define what these approaches should involve.

However, it should be acknowledged that a potential limitation of the previous framework is that it only describes the *preferred* variables of each stage. This should be expected as the instruments used are designed to measure preferences based on the students knowing themselves as learners and knowing under what conditions they have been successful in the past.

While Native American students can be successful in their learning experiences if the framework is followed, it is acknowledged that it may not be feasible or appropriate to always follow this framework. This framework should be used by educators and researchers in order create successful learning experiences for Native American adult learners. However, it should also be viewed as a preliminary first step in this process.

There are additional skills that are needed and should be viewed as important in order for a student to be a successful learner. This is particularly apparent in the learning environment where it may not always be teacher-structured and therefore, the student has to be in charge of the environment and structuring his or her own learning. It also applies to the approach to task. There were many strategies and skills that students do not report using (see Aragon, 1996). A rather important skill is time management. Another is concentration. These strategies were not identified within the conceptual framework. Consequently, it is recommended that while this framework is being followed, opportunities for developing and expanding additional skills should be occurring simultaneously.

There is no doubt that there are many areas to explore within the field of Native American teaching, learning and training. There will be many challenges for those of us who work in the field of multicultural education and training. However, it is time that these various minority groups begin receiving attention in the educational literature and have their learning preferences acknowledged as well as incorporated into educational experiences. This is a challenging and exciting area of research. It is clear that this study has only touched on and uncovered a small portion of the cognitive processes and approaches to learning of the Native American population.

References

Aragon, S. R. (1996). The development of a conceptual framework of learning for Native American adult learners in a formal educational environment. Unpublished doctoral dissertation, University of New Mexico, Albuquerque.

Bonham, L. A. (1988a). Learning style use: In need of perspective. Lifelong Learning, 11, 14-17, 19.

Bonham, L. A. (1988b). Learning style instruments: Let the buyer beware. Lifelong Learning, 11, 12-16.

Curry, L. (1983). An organization of learning styles, theory and constructs. ERIC Document No. ED 235 185.

Curry, L. (1987). Integrating concepts of cognitive or learning style: A review with attention to psychometric standards. The Curry report. The Learning Styles Network, Center for the Study of Learning and Teaching Styles. Jamaica, New York: St. John's University.

Curry, L. (1990b). Learning styles in secondary schools: A review of instruments and implications for their use. Madison, WI: National Center for Effective Secondary Schools.

Curry, L. (1991). Patterns of learning style across selected medical specialties. Educational Psychology, 11, 247-277.

Donald, J. G. (1985). The state of research on university teaching effectiveness. In J. G. Donald & A. M. Sullivan (Eds.), Using Research to Improve Teaching (p. 7-19). San Francisco: Jossey-Bass.

Everitt, B. S. & Dunn, G. (1991). Applied multivariate data analysis. London: Edward Arnold.

Fitzgerald, L. F., & Hubert, L. J. (1987). Multidimensional scaling: Some possibilities for counseling psychology. Journal of Counseling Psychology, 34, 469-480.

Friedman, C. P., & Stritter, F. T. (1976). An empirical inventory comparing instructional preferences of medical and other professional students. Research in Medical Education Proceedings (p. 85-90). 15th Annual Conference, November 1976, San Francisco, California.

Griggs, S. A., & Dunn, R. (1989). The learning styles of multicultural groups and counseling implications. Journal of Multicultural Counseling and Development, 17, 146-155.

Hadfield, O. D., Martin, J. V., & Wooden, S. (1992). Mathematics anxiety and learning style of the Navajo middle school student. School Science and Mathematics, 92, 171-176.

Kagan, J. (1964). Matching familiar figures test. Cambridge MA: Harvard University.

Keefe, J. W., & Ferrell, B. G. (1990). Developing a defensible learning style paradigm. Educational Leadership, 48, 57-61.

Kiernan, O. B. (1979). Foreword. In National Association of Secondary School Principals (Eds.), Student learning styles: Diagnosing and prescribing programs. Reston, VA: National Association of Secondary School Principals.

Kolb, D. A. (1985). Learning style inventory and technical manual. Boston: McBer and Company.

Korhonen, L. J., & McCall, R. J. (1986). The interaction of learning style and learning environment on adult achievement. Lifelong Learning, 10, 21-23.

McCarty, T. L., Wallace, S., Lynch, R. H., & Benally, A. (1991). Classroom inquiry and Navajo learning styles: A call for reassessment. Anthropology and Education Quarterly, 22, 42-59.

McShane, D. A., & Plas, J. M. (1982). Wechsler scale performance patterns of American Indian children. Psychology in the Schools, 19, 8-17.

Merriam, S. B., & Caffarella, R. S. (1991). Learning in adulthood. San Francisco: Jossey-Bass.

Myers, I. B. (1962). The Myers-Briggs type indicator. Palo Alto: Consulting Psychologists Press.

Osborn, B. (1985). Research into Native North Americans' cognition: 1973-1982. Journal of American Indian Education, 24, 9-25.

Potter, J. W., & Emanuel, R. (1990). Students' preferences for communication styles and their relationship to achievement. Communication Education, 39, 234-249.

Rezler, A. G., & Rezmovic, V. (1981). The learning preference inventory. Journal of Allied Health, 19, 28-34.

Rhodes, R. W. (1988). Holistic teaching/learning for Native American students. Journal of American Indian Education, 27, 21-29.

Rhodes, R. W. (1990). Measurements of Navajo and Hopi brain dominance and learning styles. Journal of American Indian Education, 29, 29-40.

Riechmann, S. W., & Grasha, A. F. (1974). A rational approach to developing and assessing the construct validity of a student learning style scales instrument. Journal of Psychology, 87, 213-223.

Ross-Gordon, J. M. (1991). Needed: A multicultural perspective for adult education research. Adult Educational Quarterly, 42, 1-16.

Sanders, J. A., & Wiseman, R. L. (1990). The effects of verbal and nonverbal teacher immediacy on perceived cognitive, affective, and behavioral learning in the multicultural classroom. Communication Education, 39, 341-353.

Schmeck, R. R., Ribich, F. D., & Ramanaiah, N. (1977). Development of a self-report inventory for assessing individual differences in learning processes. Applied Psychological Measurement, 1, 413-431.

Weinstein, C. E. (1987). LASSI user's manual. Clearwater, FL.: H & H Publishing.

Witkin, H. A., Oltman, P. K., Raskin, E., & Karp, S. A. (1971). A manual for the embedded figures test. Palo Alto: Consulting Psychologist Press.

The Roles of Consultants in Gainsharing Firms: Empirical Results

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Gainsharing consultants are moderately involved at the separation, preparation, evaluation and design stages, and have low involvement at the implementation stage. Organizational performance and compensation-related goal categories and suggestions, compensation, psychological ownership, internal customer and organizational performance-related outcomes are significantly higher when consultants are used. All 7 categories of goals and the corresponding outcomes had significant correlation. There were no significant differences in gainsharing goals and outcomes whether or not consultants were highly involved.

Gainsharing is a human resource management and development strategy that is designed to improve organizational processes and effectiveness, such as cooperation, communication, labor and management relations, quality, cost saving, productivity, and profits. The essence of gainsharing is that employees working on teamwork and/or employee involvement share financial gains with the company. If they surpass a stated target, a bonus would be paid based on a specified formula. Prototypes are the Scanlon, Rucker, and Improshare plans, although customized plans outnumber these prototypes. Despite the fact that the Scanlon plan was developed in the 1930s, it was not until the last decade that gainsharing in general became popular in industry and business.

Gainsharing plans are used to improve organizational processes and effectiveness and as a survival strategy to respond to external environmental changes. For example, Joe Scanlon developed the Scanlon plan as a mechanism to turn around financially troubled plants. A number of firms have become dependent on internal and external consultants to assist in this transformation process. A number of consulting firms specialize in gainsharing. However, there has been little research on the roles of consultants in gainsharing firms, especially the effects of consultants on organizational processes and effectiveness.

Problem Statement

The major question to be answered by the research was, "What are the roles played by gainsharing consultants, internal or external, in gainsharing firms? and what is their impact on organizational processes and effectiveness?" Several supporting questions were:

1. What are the roles and extent of involvement of gainsharing consultants at five different stages of the action research model–preparation, design, implementation, evaluation, and separation?
2. Is there a relationship between the use and involvement of consultants and the goals of gainsharing in firms
3. Is there a relationship between goal setting in gainsharing firms and the outcomes of gainsharing firms?
4. Is there a difference in the outcomes of gainsharing in firms based on the use and involvement of consultants?

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Literature Review

In this literature review, the roles of consultants in gainsharing plans and other human resources management practices are examined, even if anecdotal and sporadic. There are a number of descriptive and/or qualitative studies on gainsharing plans in general. However, there is limited literature regarding the roles of consultants in firms that have implemented gainsharing, although hundreds of gainsharing plans have been installed by consultants, internal and external, who have assisted in the transformation process from traditional work environment to gainsharing environment.

Bullock and Lawler (1984) showed that more than two-thirds of the gainsharing cases they were able to identify utilized the services of an external consultant or interventionist and reported a sampling bias toward consultant-assisted plans. In his work on the operation and effectiveness of the Scanlon plan in a large manufacturing plant, Schuster (1984) found an abrupt positive change in productivity, followed by positive trends for two product lines as determined by regression analysis. The Scanlon plan paid consistent bonuses, and the production committees came up with more than 2,477 suggestions, of which 70% were implemented. According to Schuster (1984), the use of consultants is an essential element in organizational education before adoption of a Scanlon plan and in keeping members informed following implementation of the gainsharing plan. Further, consultants played a key role in explaining the gainsharing plan, answering questions, developing the bonus formula, monitoring the accuracy of the bonus calculations, and responding to requests for adjustments in the formula.

Frost, Wakeley, and Ruch (1996) explained the role of a consultant in the earliest stages of initiating the Scanlon plan as follows. A consultant is employed for organizing and helping management in conducting a series of meetings to inform all people in the organization of an overview of the Scanlon plan. The consultant is instrumental in gaining the confidence of all members of the organization and utilizing this trust-building to assist all members in expressing and discussing their concerns, doubts, hopes, and desires. In sum, the above research review, even if anecdotal, suggests that consultants are important in the initial preparation, design, and implementation stages of gainsharing plans.

Other scholars see a connection between the use of consultants and program success or the improvement of organizational performance. Bullock and Tubbs (1990), using a case meta-analysis based on data which were derived from 33 case studies of gainsharing plans implemented over 50 years, found that, for firms utilizing external consultants, gainsharing had significantly greater overall impact and greater impact on organizational effectiveness, innovation, and labor-management cooperation. By utilizing survey data from managers at 269 gainsharing plans in the U.S. and Canada, Kim (1996) examined factors influencing outcomes of gainsharing. The regression analysis showed that the use of a consultant was instrumental in improving organizational effectiveness, especially product quality.

Similarly, for employee involvement programs and quality of work life programs, there exists limited literature regarding the roles of consultants. Some scholars have emphasized that consultants are critical to the design and implementation stages of the program. Lawler and Drexler (1978) placed an emphasis on qualified consultants in designing cooperative quality of work life projects. Based on a diverse group of 236 employee involvement programs in Pennsylvania, Juravich, Harris, & Brooks (1993) indicated that consultants were extremely important to their initial efforts to establish employee involvement programs in both unionized and non-unionized firms. One-third of the unionized firms and slightly fewer of the non-unionized firms continued to use consultants in their ongoing employee involvement programs. They reported that consultants are extremely important to employee involvement. Nadler, Hanlon, & Lawler (1980) used the data collected from participants in 16 labor-management committees. They found a positive association between the use of consultants and the success of labor-management quality of work life projects because outside consultants were considered critical in establishing trust between employees and management by the labor-management committee members. Doherty, Nord, and McAdams (1989) suggested that consultants as change agents might serve as a valuable resource in improving organizational performance. To them, the critical skills of gainsharing consultants were to integrate the process skills of OD with the rewards orientation, measurement systems, and design capabilities related to gainsharing. For employee participation programs in unionized settings, Eaton (1994) found that consultants were used in over half of the organizations, and the use of consultants had a positive but weak association with program success.

Regarding the roles of internal consultants, Bushe (1988) indicated that good internal facilitators played a factor in differentiating the successfully implemented programs from the terminated programs. While there were several anecdotal remarks, there was little empirical information on the roles of consultants under gainsharing plans, and no research has been done on the specific roles of consultants in gainsharing firms and their impact on organizational processes and effectiveness.

In sum, consultants have been found to be valuable resources in the design and implementation stages of gainsharing. The roles of consultants are organizing and helping management in conducting meetings to inform organizational members of gainsharing, including developing the bonus formula, monitoring the accuracy of the bonus calculations, and responding to requests for adjustments in the formula. In this way, they are instrumental in gaining trust between employees and management. Research supports a positive association between the use of consultants and organizational effectiveness.

Research Methodology

This section discusses the population and sample of this research; instrumentation of a mail survey for both management and consultants, including validation of instruments; administration of instruments; and the data collection method.

Population and Sample The research participant group included either top management (CEO, President, Chairperson, CFO, or Vice President of Human Resources) or persons in charge of gainsharing, such as director of human resources, human resources manager, gainsharing coordinator, or director of education of gainsharing firms, as well as internal and/or external consultants, depending on whether consultants were utilized or not. The total population of gainsharing firms may consist of about 2,000, according to an estimate done by the AMA (Imberman, 1992). However, the accessible population of gainsharing firms collected in a number of different ways for this study was 398. A significant portion of the list of 398 accessible gainsharing firms with contact persons was collected through information provided by external gainsharing consultants. Other gainsharing firms with contact persons, company names, and addresses were identified after matching them with those of the Dun & Bradstreet business directory (*D & B...*, 1997) and the Infotrac system at the University of Minnesota library. As a result, a mailing list with 288 contact persons, company names, and addresses was created. Although there was no research on whether consultants assisted in implementing gainsharing or not, more firms using consultants were identified than those not using consultants, resulting in the possibility of a sampling bias favoring consultant-supported interventions. The survey was mailed to all 288 names on the list.

Instrumentation Two interrelated mail survey questionnaires were developed, one for management and the other for consultants. The survey questionnaire for management was developed based on the target data composed of gainsharing features, goals of gainsharing plans, outcomes of gainsharing plans, firm characteristics, and the roles and skills of consultants. The survey questionnaire for consultants was developed with a focus on the roles and skills of consultants.

Validation of the Instruments The questionnaires were checked for validity by a panel of experts who reviewed the survey questionnaires. This group was asked for feedback on content, design, clarity, and time spent on filling out the questionnaire, as well as checking for its difficulty level. Internal consistency of the survey was determined by using Cronbach's coefficient alpha (Borg & Gall, 1989). Of the seven goals categories; compensation (.82), work smarter (.84), suggestions (.84), internal customer (.80), and psychological ownership (.87) were considered to have moderate Cronbach alphas, while organizational performance (.62) and work harder (.69) had lower Cronbach alphas. Among seven outcomes categories, the Cronbach alphas for organizational performance (.86), work smarter (.88), compensation (.89), suggestions (.89), psychological ownership (.93), and internal customer (.85) were moderate, with lower alpha for the work harder category (.73).

Administration of the Instruments and Data Collection The first survey questionnaires were mailed on April 28, 1997. Two follow-up mailings were sent to nonrespondents. In about two weeks, a follow-up post card reminder was sent to the non-respondents. In about four weeks after the initial mailing, a second follow-up mailing was mailed to the managers who had not responded by that time. Responses were received from 86 firms as a result of the three mailings, for a 29.9% response rate. After receiving completed surveys from the companies, survey instruments were mailed to the 16 consultants used by the 63 gainsharing companies that used gainsharing consultants. Fifteen gainsharing consultants (93.8%) responded to the questionnaire. Statistical analysis, including t-tests and factor analysis, were used to summarize and analyze the data collected.

Results and Conclusion

The findings from the analysis of the data provided by the 86 managers in gainsharing firms and 15 gainsharing consultants in the U.S. are reported..

Demographic Information All but one of the 15 gainsharing consultants (93%) were male, 13 (86.7%) were over 40, and 12 (80%) had a graduate degree. Eleven (74%) gainsharing consultants had more than 10 years' consulting experiences, and 12 (80%) had consulted with more than 30 firms. While 13 gainsharing consultants (86.6%) were process consultants, only 2 (13.4%) had an off-the-shelf product, and 4 (27%) were familiar with an action research model.

The Extent of Involvement of Gainsharing Consultants The roles and extent of involvement of gainsharing consultants at the stages of preparation, design, implementation, evaluation, and separation were examined. Gainsharing consultants were moderately involved at the separation (mean=3.57), preparation (M=3.31), evaluation (M=3.20), and design (M=3.12) stages, and had low involvement at the implementation stage (M=2.81).

Categorization of Goal Items In order to simplify the analysis by explaining the relationships among goal items, factor analysis was used. To determine the number of factors, the Kaiser-Guttman criterion and an interpretation of the factor analysis with an oblique rotation were used. Seven factors--organizational performance, work smarter, work harder, compensation, suggestion, psychological ownership, and internal customer--were identified and named by interpreting common characteristics of the categorized items.

The Importance of Gainsharing Goals by the Use of Consultants The importance of the gainsharing goals by the use of consultants was examined. The results of t-tests showed that organizational performance and compensation-related goal categories are significantly higher when consultants are used at $p<.05$. The itemized t-tests showed that reducing turnover in the work harder category; linking pay to performance in the compensation category; encouraging cost saving suggestions in the suggestions category; and fostering teamwork, actively involving employees, and improving communication in the psychological ownership category are significantly higher when consultants are used at $p<.05$. Increasing the ratio of employee bonus to total compensation in the compensation category is significantly higher when consultants are used at $p<.01$.

The Importance of Gainsharing Goals by Consultant Involvement The importance of gainsharing goals based on consultant involvement was also explored. The results of t-test analyses showed no significant differences of goals whether consultants were highly involved or not. However, itemized t-tests showed that improving product quality, satisfying external customers, and improving processes in the work smarter category are significantly higher when consultants are highly involved at $p<.01$. Fostering teamwork and making employees stakeholders in the organization in the psychological ownership category, and satisfying internal customers and overcoming resistance to change in the internal customer category are also significantly higher when consultants are highly involved at $p<.05$.

Gainsharing Goals and Gainsharing Outcomes Correlations between the importance of gainsharing goals and the success of the corresponding gainsharing outcomes were examined. All seven categories of goals and the corresponding outcomes had significant correlations at $p<.01$. The internal customer goals and outcomes had the highest correlation coefficient (.98), although it is difficult to explain exactly why. It is followed by the correlation between work smarter goals and outcomes (.64), and psychological ownership goals and outcomes (.56) at $p<.01$. Work harder had the fewest significant correlations.

Categorization of Outcome Items To determine the number of factors among the outcome items, the Kaiser-Guttman criterion and an interpretation of the factor analysis with an oblique rotation were used, though the results were not exactly the same. The same seven factors as the goal categories were identified by interpreting common characteristics of the categorized outcome items.

The Success of Gainsharing Outcomes by the Use of Consultants The success of gainsharing outcomes by the use of consultants was addressed. In order to compare the outcomes when the consultants were used and when they were not used, t-tests were conducted. Suggestions-related outcomes and organizational performance-related outcomes were significantly higher when consultants were used at $p<.01$. Compensation, psychological ownership, and internal customer-related outcomes were significantly higher when consultants were used at $p<.05$. Itemized t-tests showed that improving organizational performance and improving labor productivity in the organizational performance category; linking pay to performance and making labor costs more viable with the organization performance in the compensation category; making employee suggestions more productivity or quality oriented in the suggestions category; improving job interest in the psychological ownership category; reducing entitlement mentality and overcoming resistance to change in the internal customer category are significantly higher when consultants are used at $p<.01$. Improving processes in the work smarter category; encouraging people to work harder and reducing turnover in the work harder category; becoming more competitive in total compensation in the compensation category; encouraging cost saving suggestions in the suggestions category; actively involving employees, making employees stakeholders in the organization, improving communication, and improving morale in the psychological ownership category; and encouraging intrapreneurship in the internal customer category are significantly higher when consultants are used at $p<.05$.

The Success of Gainsharing Outcomes by Consultant Involvement A comparison of the gainsharing outcomes when consultants were highly involved and when consultants were less involved was made. The findings of t-tests showed that there were no significant differences of gainsharing outcomes whether consultants were highly involved or not. However, itemized t-tests showed that improving labor productivity in the organizational performance category; improving processes in the work smarter category; improving employee compensation and making labor costs more viable with organizational performance in the compensation category; actively involving employees, making employees stakeholders in the organization, improving communication, and enhancing cooperation among employees in the psychological ownership category; and reducing grievances in the internal customer category are significantly higher at $p<.01$. Improving organizational performance in the organizational performance category; using materials, supplies, and equipment more effectively in the work smarter category; becoming more competitive in total compensation in the compensation category; making employee suggestions more productivity or quality oriented and encouraging cost saving suggestions in the suggestions category; and fostering teamwork in the psychological ownership category are higher when consultants are highly involved at $p<.05$.

Contributions to Human Resource Development

As part of this research, an integrated model (Cho & McLean, 1997) was developed by combining an action research model (McLean & Sullivan, 1989, cited in Rothwell, Sullivan & McLean, 1995) with a gainsharing model (Hammer, 1988) to guide consultants, internal and external, and practitioners at different stages of gainsharing installation. The integrated model served as the foundation for the development of the survey questionnaire by explaining possible roles of consultants in gainsharing at different stages of consultant involvement, such as preparation, design, implementation, evaluation, and separation. The survey was designed to validate the integrated model around the roles of consultants in gainsharing, which eventually will enhance understanding of the roles of consultants. The research results based on mailed questionnaires will help consultants provide appropriate advice and feedback to clients at different stages so that gainsharing plans can be designed, implemented, and evaluated successfully.

According to goal setting theory, goal setting itself is critical in improving task performance (Locke & Latham, 1990). Although there are a number of studies investigating the relationship between goals and performance at the individual level, very little has been done to examine the association between goals and organizational performance. An exception is Terpstra and Rozell's (1994) work. In the present research, the correlation between goal setting and organizational performance in a teamwork environment was examined, leading to conclusions that goals are, in fact, significantly related to outcomes. Such a finding suggests that further experimental research might well support the importance of setting goals for the improvement of performance outcomes. Furthermore, the impact of the use and involvement of consultants on gainsharing goals and outcomes in firms was investigated, suggesting that there are a significant number of both goals and outcomes that are positively impacted through the use of consultants.. This study also provides information on the impact of the use of consultants and the degree of consultant involvement on gainsharing goals and outcomes in gainsharing firms. This research will provide managers and practitioners with practical advice and guidance when they are involved in planning, implementing, and evaluating gainsharing in their own organizations. Finally, the empirical results of the study can serve as a guide for top management's strategic decision making.

References

Borg, W. R., & Gall, M. D. (1989). *Educational research.* (5th ed.). New York: Longman.

Bullock, R. J., & Lawler, E. E. (1984). Gainsharing: A few questions and fewer answers. *Human Resource Management, 23*(1), 23-40.

Bullock, R. J., & Tubbs, M. E. (1990). A case meta-analysis of gainsharing plans as organizational development interventions. *Journal of Applied Behavioral Science, 26*(3), 383-404.

Bushe, G. R. (1988). Developing cooperative labor-management relations in unionized factories: A multiple case study of quality circles and parallel organizations within joint quality of work life projects. *Journal of Applied Behavioral Science, 24*(2), 129-50.

Cho, E., & McLean, G. N. (1997, March 6-9). The roles of consultants in gainsharing firms: Model development. In: R. J. Torraco (Ed.), *Academy of Human Resource Development 1997 conference proceedings* (pp. 237-244). New Orleans, LA: Academy of Human Resource Development.

Doherty, E. M., Nord, W. R., & McAdams, J. L. (1989). Gainsharing and organizational development: A productivity synergy. *Journal of Applied Behavioral Science, 25*(2), 209-230.

D & B Million Dollar Dictionary, America's Leading Public and Private Companies. (1997). Bethlehem, PA: Dun & Bradstreet.

Eaton, A. E. (1994). The survival of employee participation programs in unionized settings. *Industrial and Labor Relations Review, 47*(3), 371-89.

Frost, C. F., Wakeley, J. H., & Ruch, R. A. (1996). *The Scanlon plan for organization development, identity, participation and equity.* East Lansing: Michigan State University Press.

Hammer, T. (1988). New developments in profit sharing, gainsharing and employee ownership. In: J. Campbell, R. Campbell, & Associates (Eds.), *Productivity in organizations: New perspectives from industrial and organizational psychology.* San Francisco: Jossey-Bass.

Imberman, W. (1992). Boosting plant performance with gainsharing. *Business Horizons, 35*(6), 77-79.

Kim, D. (1996). Factors influencing organizational performance in gainsharing programs. *Industrial Relations, 35*(2), 227-244.

Juravich, T., Harris, H., & Brooks, A. (1993). Mutual gains? Labor and management evaluate their employee involvement programs. *Journal of Labor Research, 14*(2), 165-85.

Lawler, E. E. III. & Drexler, J. A. (1978). Dynamics of establishing cooperative quality of work life projects. *Monthly Labor Review, 101*(3), 23-28.

Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting and task performance.* Englewood Cliffs, NJ: Prentice-Hall.

Nadler, D. A., Hanlon, M. A., & Lawler, E. E. (1980). Factors influencing the success of labor-management quality of work life projects. *Journal of Occupational Behavior, 1*(1), 53-67.

Rothwell, W. J., Sullivan, R., & McLean, G. N. (Eds.). (1995). *Practicing organization development: A guide for consultants.* San Diego: Pfeiffer.

Schuster, M. (1984). The Scanlon plan: A longitudinal analysis. *Journal of Applied Behavioral Science, 20*(1), 23-38.

Terpstra, D. E., & Rozell, E. J. (1994). The relationship of goal setting to organizational profitability. *Group and Organization Management, 19*(3), 285-294.

The Corporate University: An Initial Study

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The purpose of this study was to study the characteristics of corporate universities. Specifically, it attempted to describe the programs, training methodologies, clientele, and staff of corporate universities. This study is based on a survey of HRD practitioners of American Fortune 500 companies. Comparisons are made between training centers of companies that were labeled as "corporate universities" and those that were not.

"Corporations are becoming one of the largest institutions for education and training" (Watkins & Bellinger, 1996). Many corporations have established their own campuses to equip their employees with the knowledge and skills necessary to keep a competitive edge. Many of these campuses are called "corporate universities." Main reasons for proliferation of the corporate universities are dissatisfaction with university curricula, a desire to control what is taught, and frustration by academics' misunderstanding of the "real world" (King, 1996).

With the fast growth of corporate universities, there is no consensus over the definition and components of corporate university since its origin. "The individual corporation school, the predecessor of the modern corporate classroom, ... began at least as early as 1872, had no uniform structure" (Eurich, 1985, p. 36). The names of corporate universities also vary. According to Eurich (1985), some corporate campuses were also labeled "college, university, institute, or education center." In some states such as Texas and Florida, the terms "university" and "college" can not be legally used for a non-accredited educational facility (Densford, 1996).

The institutions that fall into the category of "corporate university" have grown from around 400 in 1990 to more than 1,000 in 1996 (Meister, 1996). However, research on the corporate university has lagged behind development and practice. In review of literature only one book, one journal and three dissertations relevant to corporate university were identified. The only book was titled *Corporate Quality Universities: Lessons in Building a World-Class Workplace* (Meister 1994). The author of the book studied the organizing principles, training programs, methodologies, and cutreach of 30 corporate universities. According to her opinion, these 30 universities performed best and she called them "corporate quality universities." She especially used the term "corporate quality university" and gave the definition to distinguish these universities from other corporation campuses labeled college, university, institute, or education center. The non-academic journal, *Corporate University Review* does not give a definition on corporate university. An on-line dissertation search from 1978-1996, reveals only 3 dissertations relevant to corporate universities. The first dissertation studied the evolution of degree programs in four corporate universities (Register, 1991). The second investigated the development of the National Technological University (Mays, 1988). The third conducted an evaluation of training programs in Hamburger University (Watson, 1985). The three dissertations only studied specific corporate universities, and two of them studied the universities with degree-programs. The overall study of non-degree corporate universities is not available.

Many questions are left unanswered regarding corporate universities, such as: how many corporations have corporate universities? What makes corporate universities unique? What are the differences of various names as "university, college and institute?" Lack of overall research and varieties of the names on corporate university can lead to different understandings of this concept. "Claims for multiple definitions suggest that the field values not having a general definition, while at the same time it languishes from a lack of public recognition" (Newsom, 1992, p. 31). The corporate university needs a common definition to communicate its existence to the public, and allow professionals to input their interest and expertise. Therefore, the definition of corporate

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university or similar corporate campuses that meet the criteria of corporate university should be clarified, and the potential differences among these universities, colleges, institutions, and educational centers should be identified.

Purpose of the Study

The purpose of this study was twofold: 1) to describe the characteristics of corporate universities or corporate campuses that fall into the "corporate university" category. Specifically, to report on the programs, clientele, staff and to interpret the functions at corporate universities. 2) To get a list of corporate universities of American Fortune 500 corporations to build a foundation for further study on corporate universities.

Research Questions **.** This study is guided by six research questions:

1. Does the organization have a corporate university or a separate entity that is responsible for corporate training and education?
2. What are the location, organizational structure and staff composition of corporate universities and training/education entities?
3. What types of programs are offered in corporate universities or training/education entities?
4. Who are the clientele?
5. What methods are used to deliver training?
6. What is the primary funding source for corporate universities or training/education entities?

Significance of the Study. This study has revealed the general characteristics of corporate universities and thereby advances the knowledge in this field. This study was based on a survey of Fortune 500 corporations, which are assumed to be models for training and education. Their practices in corporate universities may make HRD (Human Resource Development) professionals aware of the trend of this field.

The findings of this study have implication for University HRD professional preparation programs regarding what kinds of skills and knowledge should be incorporated into the academic preparation of HRD professionals. The information on corporate universities from this study can be used by corporate leaders to assess and think strategically about their educational entities.

Method

This study utilized descriptive survey research. To cover a large population and geographic scope, a questionnaire was developed to facilitate answering the key questions.

Subjects. The population of this study were American corporations. The sample were all American 1996 Fortune 500 corporations because "large firms are more likely to implement and sustain formal company training programs" (Carnevale & Carnevale, 1994, p. 27). The HRD managers in these Fortune 500 corporations were chosen as questionnaire respondents. The list of Fortune 500 corporations was found in 1996 Fortune Magazine. The names and addresses of HRD managers from Fortune 500 corporations were mostly obtained from the American Society for Training and Development (ASTD) Membership Directory 1996. These professionals were identified with titles such as "training coordinator," "HRD manager," "training and development coordinator," and so forth. In cases of corporations without members listed in the ASTD Membership Directory, the questionnaire was sent to "the Director of Training" of the corporation.

Instrumentation. A questionnaire was developed to address research questions and support in collecting data. A brief instruction on how to complete the questionnaire was included in the instrument. The instrument basically consisted of multiple choice questions regarding the organizational structure, staff composition, programs, clientele, and methods of training delivery in corporate universities or training/education entities. Types of training programs, recipients of training and methods for training delivery, were identified from an article in *Training* Magazine, "1996 Industry Report: Who's Learning What?" Another article, "Models for HRD Practice" (McLagan, 1989) was used to identify staff positions in training entities. Based on the two articles, the researchers selected the most commonly existent types and positions with the aid of literature review in related fields. Respondents were asked to check all that apply. A dichotomous variable (yes/no) question was used to determine the existence of corporate universities or training/education entities. A final open-form question allowed respondents to comment and to provide additional information on their universities or entities.

Face validity of the instrument was accounted for through an expert review in March 1997. Draft copies of the instrument and cover letter were revised by the research supervisor and other faculty in Department of Human Resource Education at University of Illinois at Urbana-Champaign. The main purpose of expert review was to obtain reactions and suggestions regarding the instrument items and layout.

Data Collection. Each survey instrument was numerically coded to allow the researchers to monitor which corporations responded. A stamped, self-addressed questionnaire, along with a personally addressed cover letter explaining the importance and purpose of the study, were mailed to the subjects in April of 1997. An offer to mail a summary of the results to the respondents was made in the cover letter to increase the response rate. Forty-nine completed questionnaires were returned after the initial mailing. Follow-up questionnaires and cover letters were mailed to the non-respondent corporations one month after the initial mailing. To increase the response rate, the uniform addressee title "director of training" replaced the personal names of HRD staff of corporations in the initial mailing. Forty-two follow-up questionnaires were returned. In total, ninety-one questionnaires were returned and the final response rate was 18.2%. Ninety of the ninety-one returned questionnaires were usable. The unusable one only indicated that a training/education entity existed, but did not provide any other information because they had a very decentralized training function according to the respondent.

Data Analysis. Collected data were analyzed both quantitatively and qualitatively. All results were differentiated between the corporations who stated that they had corporate universities and those who had training/education entities, to observe different characteristics of the two.

A microcomputer was used to determine how the respondents distributed the response alternatives for each quantitative question. Accordingly, the mean, standard deviation, frequencies and percentages of the data were calculated. The frequencies were ranked to identify their relative importance. Answers on open-ended questions were summarized, categorized, and analyzed for emergent themes.

Results

The major findings of this study were organized by research questions and are presented as follows.

Research Question 1: Does the company have a corporate university or a separate training/education entity that is responsible for employees' training and education?

One purpose of this survey was to get a list of corporate universities in Fortune 500 corporations. Table 1 shows the existence of corporate universities and training/education entities within the responding Fortune 500 corporations. A total of 91 returned questionnaires, 18 corporations (19.8%) stated that they had corporate universities, 59 corporations (64.8%) stated they did not have corporate universities but separate training/education entities, 14 corporations (15.4%) stated that they had neither corporate universities nor training/education entities.

Table 1. Numbers of Corporations With or Without Corporate Universities or Training/Education Entities (N=91)

	Number	Percentage
Corporate University	18	19.8
Training/Education Entity	59	64.8
None	14	15.4

Table 2 shows a list of 19 corporate universities. One corporation had two universities (see Table 2, No. 10), the rest had one for each. Twelve of these 19 corporate universities had names which included the word "university," the rest had labels like institute, academy, and center. The majority of these universities also included the corporate names in the university names.

Table 2. List of Corporate Universities

Name List of Corporate Universities

1. Republic University
2. First University
3. Five Star University
4. Supervalu University
5. Spartan Stores University
6. University of Excellence
7. Quaker University
8. Hamburger University
9. Office Depot University
10. Medical Management University
    Sales and Marketing University
11. Los Angeles Times Management Institute
12. Caterpillar Training Institute
13. Baxter Institute for Training and Development
14. Graybar Training
15. PM Academy
16. Quality Academy
17. Career Development Center
18. Micron Training and Education Center

Research Question 2: What are the location, organizational structure and staff composition of corporate universities and training/education entities?

The results of research question 2 were organized into three sections: location, organizational structure, and staff composition.

Location. Table 3 reveals whether corporate universities and training/education entities were located within company headquarters, or had one or more separate sites. Approximately 61% of corporate universities and 72% of training/education entities were located within corporate headquarters. Around 39% of corporate universities and 31% of training/education entities had multiple sites. Only 5.6% of corporate universities and 6.9% of training/education entities had one separate site.

Table 3. Location of Corporate Universities (n=18) and Training/Education Entities (n=58)

Location	Corporate University		Training/Education Entity	
	f	%	f	%
Company Headquarters	11	61.1	42	72.4
One Separate Site	1	5.6	4	6.9
Multiple Sites	7	38.9	18	31

Organizational Structure. Three respondents reported their unusual style of sub units. One respondent from a training/education entity stated that all their sub units were purchased from outside. Another respondent from another training/education entity described their sub units like this:" The work is integrated into a team environment where there are content program areas, logistics business management, and access methods." One respondent from a corporate university reported that their sub units were organized by the specific departments they supported.

Some of those universities or entities without sub units had only 1-3 staff holding positions like director, manager, or organizational development professional. These limited staff usually assumed multiple responsibilities regarding training such as instructor, evaluator, and technology specialist. However, other universities and entities without sub units still had a variety of staff compositions.

Table 4 reveals the types of the sub units of training/education entities and corporate universities with frequencies of more than 2.

Staff Composition. Table 5 shows the mean and standard deviation of various positions held by training staff in corporate universities and training/education entities. One staff member could hold more than one position. The respondents were asked to report the full-time equivalent staff.

The positions relevant to instruction, such as instructors and instructional designers, were held by more staff members than others. Corporate universities on average had 8.1 instructors and 4.6 instructional designers. Training/education entities on average had 11.6 instructors and 4.2 instructional designers. The positions held by 1-3 staff members in corporate universities included: evaluators, OD professionals, and marketers. The positions held by less than one staff member were HRD manager, technology specialist, and performance consultant. Training/education entities had more positions held by 1-3 staff.

Table 4. Types of Sub Units of Corporate Universities (n=18) and Training/Education Entities (n=58)

Sub Units	Training/Education Entities f	Corporate Universities f
Management Development	13	3
Technical Training	12	2
Instructional Design	11	6
Consulting	5	4
Employee Development	5	
Administration	4	
Course Development	4	
Learning Center	4	
Marketing	4	2
Technology	4	2
Career Development/Planning	3	
Computer Training	3	
Evaluation	3	3
HRD	3	
Leadership Development	3	2
Professional Development	3	
Quality Training	3	
Training	3	
Computer-based Training	2	
Diversity Training	2	
HR Planning	2	
Operations	2	
Organizational Development	2	
Records/Documentation	2	
Systems Training	2	
Systems Support	2	
Videosupport	2	
Delivery		4

Table 5. Number of Staff in Corporate Universities (n=18) and Training/Education Entities (n=58)

Position	Corporate University		Training/Education Entity	
	M	SD	M	SD
Evaluator	2.6	9.4	1.6	6.26
OD professional	1.6	2.5	2.4	5.46
Instructor	8.1	12.8	11.6	33.57
Marketer	2.6	9.4	0.7	4.24
Instructional Designer /Curriculum Developer	4.6	9.5	4.2	8.7
HRD Manager	0.5	0.6	2.4	7.34
Technology Specialist	0.5	0.97	1.7	4.73
Performance Consultant	0.8	1.4	2.3	7.87

The high standard deviation for each position indicated the high variability in terms used as titles for these positions. Some other positions were rarely mentioned by corporate universities and training entities. For example, corporate universities mentioned registrar and director of training, while training/education entities mentioned many more positions such as training officer, training administrator/manager, administration assistant, supervisor, career development specialist and brokers of training.

Two respondents also reported the situation of their part-time staff. In one corporate university, there were around 100 part time or contract staff against 13 full-time staff.

Multiple responsibilities assumed by one person were also reported by four respondents. One respondent of a training/education entity stated: "I do it all." This respondent worked as an evaluator, an organizational development professional, an instructor, and an instructional designer. Another training/education entity reported that it had 32 members of staff who perform 7 positions each. One respondent from a corporate university indicated that all of their 40 instructors also worked as evaluators, marketers, and instructional designers.

Research Question 3: What types of courses are offered in corporate universities or training/education entities?

Table 6 reflects the types of training programs delivered by corporate universities and training/education entities. The training programs with significant difference in rank or percentage between corporate universities and training/education entities were highlighted.

Compared with training/education entities, corporate universities placed much more emphasis on communication skills, customer relations/services, new methods/procedures, and personal growth, and less on sales and customer education.

Communication skills, management development, and supervisory skills were the most popular programs provided by both corporate universities and training/education entities.

The training programs with the highest percentage provided by training/education entities were management development and supervisory skills. The one with the highest percentage by corporate universities was communication skills. The least offered programs by training/education entities were clerical/secretarial skills and wellness. Corporate universities were the lowest for customer education and wellness.

Table 6. Types of Training Courses Offered in Corporate Universities (n=18) and Training/Education Entities (n=58)

	Corporate University			Training/ Education Entity		
	f	%	rank	f	%	rank
Communication Skills	18	100	1	47	81	3
Customer Relations/Services	17	94.4	2	37	63.8	6
Management Development	16	88.9	3	50	86.2	1
Supervisory skills	15	83.3	4	50	86.2	1
New Methods/Procedures	14	77.8	5	27	46.6	9
Technical Skills /Knowledge	14	77.8	5	47	81	3
Basic Computer Skills	12	66.7	7	41	70.7	5
Personal Growth	12	66.7	7	30	51.7	8
Executive Development	8	44.4	9	26	44.8	10
Employee/ Labor Relations	7	38.9	10	18	31	12
Sales	7	38.9	10	31	53.4	7
Safety	6	33.3	12	22	37.9	11
Remedial/Basic Education	4	22.2	13	12	20.7	14
Clerical/Secretarial Skills	4	22.2	13	11	19.0	15
Wellness	3	16.7	15	11	19.0	15
Customer Education	2	11.1	16	14	24.1	13

Research Question 4: Who are the recipients of the training?

Table 7 presents the results of beneficiaries of the training programs offered by corporate universities and training/education entities, which reflected that corporate universities and training/education entities had a similar constitution of recipients of their training programs. Managers were the first majority group of training recipients by both institutions, followed by professionals, customer service personnel, clerical and support staff. In both institutions, vendors and customers received the least training.

Table 7. Types of Recipients of Training Courses in Corporate Universities (n=18) and Training/Education Entities (n=58)

	Corporate University			Training/Education Entity		
Recipients	f	%	rank	f	%	rank
Managers	17	94.4	1	53	91.4	1
Professionals	17	94.4	1	47	81	2
Customer Service Personnel	15	83.3	3	44	75.9	3
Clerical & Support Staff	14	77.8	4	43	74.1	4
Sales Professionals	12	66.7	5	33	56.9	6
Executives	11	61.1	6	28	48.3	7
Production Workers	10	55.6	7	37	63.8	5
Vendors/Suppliers	5	27.8	8	9	15.5	9
Customers	5	27.8	8	15	25.9	8

Research Question 5: What methods are used to deliver training?

Table 8 reveals the kinds of training methods used in corporate universities and training/education entities. Corporate universities and training/education entities had very similar preferences for training methods. Lectures, videotapes, games, role play, one-on-one instruction, and case studies were checked by both institutions as the most popularly utilized training methods. However, lectures were the first training delivery method by corporate universities and video tapes and role play were the first methods utilized by training/education entities.

The training delivery methods which have relatively higher requirement for technology and facilities, were the least utilized. Computer conferencing, films, and interactive video, were least utilized by corporate universities. Computer conferencing, teleconferencing (audio only), and Internet or web-based training were least utilized by training/education entities. In terms of percentage, training/education entities had much higher percentage in CD-ROM, interactive video, and films, as highlighted in Table 8.

Table 8. Training Methods in Corporate Universities (n=18) and Training/Education Entities (n=58)

	Corporate University			Training/Education Entity		
	f	%	rank	f	%	rank
Lectures	17	94.4	1	50	86.2	3
Videotapes	16	88.9	2	53	91.4	1
Games/Simulations	16	88.9	2	48	82.8	4
Role Play	15	83.3	4	53	91.4	1
One-on-one Instruction	15	83.3	4	48	82.8	4
Case Studies	15	83.3	4	48	82.8	4
Computer-based Training	15	83.3	4	43	74.1	7
Self-assessment /Testing Instruments	12	66.7	8	35	60.3	8
Non Computerized Self-study Programs	12	66.7	8	34	58.6	9
Audio tapes	9	50.0	10	27	46.6	11
Multimedia	8	44.4	11	25	43.1	12
CD-ROM	7	38.9	12	34	58.6	9
Slides	7	38.9	12	24	41.4	13
Video Teleconferencing	6	33.3	14	18	31	14
Internet or Web-based	4	22.2	15	15	25.9	17
Teleconferencing (audio only)	3	16.7	16	7	12.1	18
Interactive Video	2	11.1	17	18	31	14
Films	1	5.6	18	17	29.3	16
Computer Conferencing	1	5.6	18	4	6.9	19

Research Question 6: What is the primary funding source for corporate universities or training/education entities?

Table 9 shows the sources of funding for corporate universities and training/education entities. The two types of institutions had very similar order of funding sources. Corporate budgets were their most important funding source. The second source was from business units. Charges from customers only constituted a minor funding source.

Table 9. Primary Funding Source of Corporate Universities (n=18) and Training/Education Entities (n=58)

	Corporate University		Training/Education Entity	
	number	%	number	%
Corporate Budget	11	61.1	42	72.4
Business Units	6	33.3	20	34.5
Customers	1	5.6	3	5.2
Others	0	0	1	1.7

Comments on Corporate Universities and Training/Education Entities. The final open-ended question asked respondents to give their comments or pertinent information regarding their corporate universities and training/education entities. Thirteen respondents wrote their comments which were quoted and grouped as follows:

1) Decentralization of corporation's training functions. Four training/education entities, one corporate university, and one corporation without corporate campus stated that they had decentralized training functions. One respondent stated like this:" Training is very fragmented in our company, various groups or departments have their own training functions."

2) "Virtual" nature of corporate university . Two respondents from two corporate universities reported that their universities were not physically existent. One respondent stated:" Quaker University is a 'virtual' organization in which reactively changes with business needs." Another respondent stated:" The two universities are 'virtual' in nature. They are more about process than a physical place. They also are founded on principles of human performance technology."

3) Expressing interest in the concept of "corporate university". One corporate university, one training/education entity, and two corporations without corporate campuses expressed their interest in the concept of "corporate university."

4) Description of the changing situation. Three respondents, one of them from a corporate university, mentioned that their entities or universities have been or will be affected due to the changes that took place in the organization. One respondent stated:" Currently undergoing major downswing, situation of training to change."

Discussion and Implications

This study served as the first survey of the status of corporate universities of all Fortune 500 corporations. The results of this survey can be used as baseline data for future study in this field. The comments given by respondents in open-ended questions also addressed a need to study this field.

According to the results of this study, the numbers of corporate universities is less than expected. The majority (64.8%) of the corporations with corporate campuses did not label their campuses as corporate universities.

Corporate universities had lower percentage of headquarters sites and higher multiple sites than training/education entities. And, corporate universities had lower proportion of funding sources from corporate budget than training/education entities. This may suggest the higher decentralization of training functions in corporate universities than in training/education entities.

Corporate universities had much less variety of types of sub units. This is consistent with the fewer types of staff in corporate universities than in training/education entities. As for types of sub units and staff, corporate universities tended to have types related to instruction, evaluation, and marketing. The higher diversity of these types in training/education entities may suggest the more flexibility of the setting of these sub units and positions to fit different corporation needs than training/education entities.

The results also indicated that the Fortune 500 corporations did not have a large quantities of personnel especially considering the size of the organization. On average these universities or entities had 20-30 positions and many of these positions could be held by one staff member. The size of the personnel also vary largely among different universities and entities. This implies that HRD professionals should be equipped with versatile, flexible, and relevant knowledge and skills in order to work in different departments and assume multiple responsibilities to serve various corporate needs.

Corporate universities and training/education entities had very similar order of importance in types of training courses, recipients of training, and training methods. However, the frequencies and percentage may vary partly due to the large difference of sample size between corporate universities and training/education entities. Due to the same reason, the training/education entities tended to have more variety than corporate universities.

Soft skills were the "hot" topic of training programs in both corporate universities and training/education entities. Specifically, communication skills, management development, and supervisory skills were the most common themes. The majority of the recipients of the training courses were internal employees of the organizations. All these concerns should be incorporated into academic preparation of HRD professionals who plan to work in corporate settings.

Further longitudinal research is recommended to investigate the development and changes of the status of corporate campuses.

References

Carnevale, A. P. & Carnevale E. S. (1994). Growth patterns in workplace training. Training & Development, 48 (5), 22-32.

Densford, L. E. (1996). Naming a corporate university is no slam dunk. Corporate University Review, 4 (4), 4.

Eurich, N. P. (1985). Corporate classrooms: The learning business. Lawrenceville: Princeton University Press.

Register, A. M. (1991). Corporate-based higher education degree programs: Origin, evolution, and implications. Unpublished doctoral dissertation, Oklahoma State University.

Mays, M. E. (1988). The historical development and future of the national technological university. Unpublished doctoral dissertation, University of North Texas.

Meister, J. C. & King, W. (1996). Corporate universities: opposing schools of thought. Computerworld, 30 (29), 98-99.

McLagan, P. A. (1989). Models for HRD Practice. Training & Development Journal, September, 111-121.

Meister, J. C. (1994). Corporate quality universities: Lessons in building a world-class work force. Alexandria: American Society for Training and Development.

Newsom, R. (1992). Adult education needs a definition the public understands. Adult Learning, 4 (2), 31.

(1996). 1996 industry report: Who is learning what? Training, 33 (10), 53-71.

Watkins, K. E. & Bellinger, J. W. (1996). Partnering for research: The ford design institute/UGA research project. Paper presented at the Annual Conference of the Academy of Human Resource Development, Minneapolis, MN.

Watson, T. L. (1985). An evaluation of an organizational training program: Assessing cognitive, affective, and behavioral outcomes. Unpublished doctoral dissertation, Loyola University of Chicago, Chicago.

Guiding principles of Workforce Development

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Effective, efficient, comprehensive, and responsive workforce development systems are being increasingly recognized as integral parts of world-class economies. For the past decade, efforts have been underway in communities and states across the US to build workforce development systems that meet the needs of business, are responsive to all employable individuals, and which enhance local, regional, or national economic performance. This paper describes a set of 10 principles guiding the development of world-class workforce development systems. The principles grew out of a research project that identified and articulated the critical components of effective workforce development systems.

Increased global competition, rapidly evolving technology, dramatic changes in the demographics of the workforce, customer insistence on high quality products and services, growing workplace demands for more competent and skilled employees, and the need for long-term, stable economic growth all are all putting dynamic, new and complex pressures on the development of workplace expertise. Jobs today typically require a higher levels of knowledge, problem-solving, and technical skills than ever before to adapt to rapidly changing technology and markets. In many occupations, job requirements are growing progressively more demanding even at the entry level, so individuals without basic skills and competencies are having a difficult time finding and keeping jobs. As a result, there are increasing demands on children and young adults in school, new entrants to the workforce, and long-tenured employees to be better prepared for the future, to be educated to higher standards, and to be able to acquire the skills that will enable them to compete in a dynamic labor market. From a broader perspective, a well-trained, capable workforce is an integral component of organizational profitability. It is also a key factor in economic development because it helps communities, states, and nations attract and retain high-growth businesses. These and other factors have made it increasingly imperative that effective workforce development (WFD) systems be in place to foster the development of human resources.

Workforce development systems here are conceived of in the broadest sense. From this perspective, a) a key goal of WFD systems is to give all citizens the opportunity to be fully employed and have access to the development opportunities needed for a full and productive life; b) WFD systems explicitly address the work related development of all unemployed and employed persons; c) WFD systems offer organization and job specific development AND emphasize non-organization specific development such as basic skills, workplace literacy and career development; d) the nature of WFD systems means they are strongly influenced by their geo-political context, including social, political, economic and cultural forces.

Current WFD systems in the US have been criticized as being ineffective or underutilized as a means of encouraging growth and development at both the individual or organizational level. This is largely a function of the failure of WFD programs to impart the necessary skills, knowledge, attitudes, and abilities to match the needs of a dynamic workplace and the fragmented, uncoordinated nature of many of the current systems. A major consequence of the former has been the inability of WFD systems to enhance employment opportunities for its constituents or to help local employers compete more successfully in regional, national, and global economies. The latter is indicative of inefficient systems in which limited resources are poorly used and that force WFD customers to deal with an array of separate, categorical training and education programs. In short, current WFD systems are poorly integrated collections of programs and services, collections that are often as confusing to customers as they are inappropriate.

One of the most important priorities facing economic communities today is the transformation of current education and job training programs into comprehensive, integrated systems

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that support expanded economic opportunity and growth. This paper describes a research project, conducted by the Louisiana State University School of Vocational Education-Human Resource Development Program, that undertook to identify and articulate the critical components high performance workforce development systems. The present paper summarizes the results of this research into a set of 10 core principles of WFD.

Method

There exists a substantial body of literature focusing on the theory, philosophy, methodology, and experiences of workforce development systems. The present study conducted an extensive literature review of this literature to identify key attributes of high performance workforce development systems. Information obtained from the review was synthesized into a draft document. The content validity of the document was established through a process of review and revision by a panel of experts. Nineteen experts from a wide variety of fields including economic development, program measurement, educational and occupational standards, political science, public administration, social work, psychology, vocational education, primary and secondary education, higher education, extension education, adult education, human resource development, management, and human ecology reviewed and suggested modifications to the initial document. The suggested modifications were evaluated and incorporated into the final document where appropriate.

Results

Results produced a set of 44 quality standards and accompanying performance criteria that reflect critical components of "world class" WFD systems (Holton, Bates, & Naquin, 1997). Although the number, detail and complexity of the standards and performance criteria precludes presentation in this format, their essence is effectively captured in a set of 10 core principles. These core principles, summarized below, represent the guiding principles of high performance WFD systems. They are seen as having application at the community, state or national level.

Guiding Principles of Workforce Development

1. ***The development, management, and operation of the WFD system is based on system principles.***

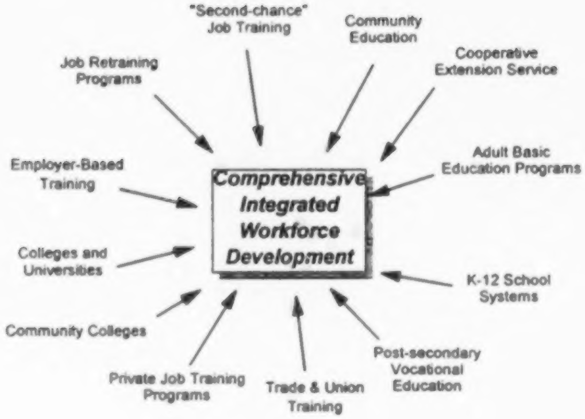
System principles provide policy-makers, program mangers, service providers, participants, and others a functionally important perspective from which to work in and analyze the complex and evolving environment of workforce development. The systems perspective is important because it specifies the need for relational thinking (Jacobs, 1988) to account for all the connections, interactions, and influences that affect WFD. It is also important because it assumes the problems and events that affect WFD systems are not isolated and random occurrences. Rather, they are "a result of antecedent conditions that can be predicted and controlled" (Jacobs, 1989, p. 30).

Briefly, system principles dictate that a) the WFD system is a collection of components that have a collective output, goals and mission; b) WFD system components influence and are influenced by the social, political, economic, and cultural environment in which they function; c) all WFD system components from the program, sub-system, and system level are interdependent, connected in an complementary, reinforcing, and organized manner; d) all workforce development components are organized to process inputs into outputs in the most efficient manner possible to assure that the system goals are achieved and the needs of customers satisfied; and e) system management focuses on how resources flow through processes to achieve stated goals.

2. ***The WFD system provides an integrated, comprehensive education and training system.***

Comprehensive WFD systems encompass a wide range of education, training, and support components including some or all of those shown in Figure 1 on the following page. A major

Figure 1


"Second-chance" Job Training
Community Education
Cooperative Extension Service
Job Retraining Programs
Adult Basic Education Programs
Employer-Based Training
Comprehensive Integrated Workforce Development
Colleges and Universities
K-12 School Systems
Community Colleges
Post-secondary Vocational Education
Private Job Training Programs
Trade & Union Training

problem with many WFD systems is the presence of numerous overlapping and duplicative education and training programs which are uncoordinated and which consequently waste significant resources. An integrated WFD system requires that all programs and institutions are linked in an articulated, sequential series of education and training activities that individuals can use to progress from relatively low knowledge and skill levels to higher knowledge and skill levels (Grubb, 1995; 1996a; 1996b; National Center on Education and the Economy, 1995). Articulation can begin as early as elementary school, include all education levels and extend to school-to-work programs, adult basic education, continuing education, work-based learning and so on (New York State Department of Labor, 1996; New Jersey State Employment and Training Commission, 1996). Integration of these various components is achieved through policy level coordination which includes coordinated program goals, benchmarks, performance objectives, quality standards, and consistent terminology. Effective integration requires the development and implementation of explicit linkages, such as articulation agreements detailing programmatic and credentialing system synthesis, between education and training systems, agencies, and programs. Such integration makes explicit the need for a process establishing inter-program and inter-agency communication, issue deliberation, planning, and consensus building (Trott & Baj, 1996). A key supporting component is an information management system that uses common terms and definitions, includes data elements that conform to a uniform set of criteria, and includes network linkages to facilitate inter-program and inter-agency communication (Workforce Coordinating Council, 1995).

3. *WFD systems are built on the principle of partnership.*

It is widely recognized that an effective public-private partnership is critical for the long-term success of WFD systems. Both public and private sectors must partner in setting goals, system coordination and oversight, the design of skills and certification systems, and the development of labor market and provider information systems. The principle of partnership explicitly dictates that a strategic planning process exists which supports the development of a public-private consensus on WFD system problems, goals, priorities, and defines how the system will achieve its goals and objectives over the short and long term.

An effective partnership is dependent on extensive business and industry participation in a wide range of activities. Unfortunately, little is known about what it takes to involve employers in

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WFD activities or what strategies are effective for encouraging employer involvement in specific activities (Osterman, 1995). Despite a number of potential benefits to participation in WFD activities, such as development of a more skilled labor force, enhanced public relations, and the availability of low cost labor, many believe that gaining widespread cooperation of employers in WFD activities will be challenging. There are, for example, tradeoffs between required intensity of participation and willingness to participate (Bailey, 1995) in addition to barriers to employer involvement such as unacceptable costs, management opposition, and difficulties working with public sector education and training programs. Because private sector organizations will certainly weigh the benefits of participation against the costs, an incentive system designed to ensure that employers see value-added from participation should be in place. A number of possible incentives are possible (Holton, Bates, and Naquin, 1997).

4. ***The WFD system is built on the twin principles of evaluation and accountability through outcome measurement and the development and implementation of performance standards for all provider sub-systems.***

The focus on performance measurement is designed to move WFD systems beyond simply monitoring, reporting, and the reviewing results against strategic plans, to a commitment to evaluate the efficiency and effectiveness of programs within the system and of the overall system itself. Evaluation links measurable objectives (both process and outcome), system expectations, and performance with system goals. It also provides a feedback link so that continuous improvement becomes an inherent component of the system. The principle of accountability focuses on results, the needs of customers, and on the market responsiveness of the system; directs management processes toward achieving results, not tracking inputs and processes; and establishes responsibility for outcomes.

Measurement is the core of any evaluation and accountability scheme. In the past, measures of success for various WFD programs have often been developed independently and have typically involved data elements and definitions that vary from program to program. Consequently, there was often little or no consensus on how to measure success across programs. The selection and definition of performance measures is critical:. Performance measures should be:

a) explicitly related to system goals and objectives;
b) easily understood by all stakeholders including the general public;
c) address key evaluative, planning, and policy decisions;
d) defined so they do not have adverse or unintended consequences (e.g., different measures do not result in inequitable performance demands);
e) defined so that performance has a direct effect on measures;
f) defined so that performance is the primary influence on the measures.

5. ***The WFD system design is based on sound performance management principles.***

Performance management integrates the systems perspective with evaluation and accountability. It is a key function for communicating direction, promoting policy coordination, defining roles, tracking and improving program and subsystem performance and allocating resources (Rummler & Brache, 1995; Sheets & Stevens, 1992). Developing an effective performance management system requires identification and assessment of key variables affecting WFD system performance. Performance management is an essential steering mechanism for governance in WFD programs. An effective performance management scheme establishes a framework of accountability that translates system goals and objectives into an analysis-design-development-implementation-evaluation cycle that includes a performance measurement strategy and a monitoring and reporting strategy (Baj, Sheets, & Trott, 1996). This cycle continually examines and validates quality standards (both process and outcome), diagnoses performance problems, and provides the impetus for establishing a continuous improvement process.

Because of the complexity surrounding WFD system design, it is necessary to use models to simplify and guide the process. The framework for the development of WFD systems presented in Figure 2 on the following page adapts a model originally presented by Swanson (1994). This model provides both a conceptual guide to WFD system development as well as a theoretical underpinning for WFD system design standards. This model outlines three levels of performance (community, process, and citizen) matrixed with five performance variables (mission/goal, system design, capacity, motivation, and expertise). Improvement of WFD systems is dependent on a thorough understanding of these performance variables and their functioning at different levels of performance. The questions addressed in the matrix assist in the identification of WFD system deficiencies, disconnects, and advantages, provide a basis for continuous performance improvement, and a blueprint for designing and redesigning WFD systems.

6. ***The WFD system is market oriented.***

This principle specifies that WFD needs are best addressed through market-oriented strategies. These strategies include:

a) Government adoption of the role of catalyst in WFD system investment, leveraging private sector investment and public-private ventures, and the use of incentives and sanctions designed to encourage private sector investment and public-private cooperation.

b) The development of criteria and processes that establish the market-place validity of education and skill standards.

c) Invoking market principles such as customer empowerment that promote greater responsibility and control on the part of individual consumers in the management of their education,

Figure 2

Workforce Development System
Performance Diagnosis Matrix
(Adapted from Swanson, 1994)

	Community Level	**Process Level**	**Citizen Level**
Mission/Goal	Do the community WFD goals reflect the current economic, political, and cultural forces?	Do the WFD processes enable the community to maintain a world class workforce and offer high quality jobs to citizens?	Are the professional and personal goals of citizens congruent with the community WFD goals?
System Design	Does the community provide structure, laws, and policies supporting WFD?	Are the WFD programs designed to work an integrated system?	Do citizens face obstacles that keep them from participating in the WFD systems, or impede their job performance?
Capacity	does the community have the leadership, capital, programs and infrastructure to achieve its WFD system goals?	Does the WFD system have the capacity to meet the needs of employer and citizen customers in terms of quantity, quality and timeliness?	Do citizens have the basic mental, physical and emotional capacity to perform?
Motivation	do the policies, culture, and reward systems support WFD?	Does the process provide the information and support factors to maintain it?	Do citizens want to develop high levels of work skills?
Expertise	does the community establish and maintain policies and resource to select and prepare WFD providers?	Does the process of developing work expertise meet the demands of dynamic work environments?	Do the citizens have the knowledge, skills, attitudes, and experiences needed for high quality jobs?

training, and career development. One widely used strategy, for example, is to increase and improve a range of WFD information provided to individual consumers. A comprehensive consumer information system which provides consumers with a wide range of programmatic, service provider performance information, and economic development planning, labor market planning, and occupational supply and demand data will facilitate improved consumer decision-making (Workforce Coordinating Council, 1995). Other customer empowerment strategies include career development, career counseling, and case management systems that maximize the WFD system's value to individual consumers (Council of Great Lakes Governors, 1993) and providing individual consumers with more power to direct their investment in the WFD system (e.g., the use of direct consumer funding such as a voucher system) (Sheets & Stevens, 1992).

d) A component of managed competition or contestability. One major problem with many workforce preparation systems is the lack of contestability in service production arrangements. This has, in many cases, produced provider monopolies, restricted production arrangements, and preferred provider designations. Policies supporting contestability should include those stipulating separation between administration and service delivery (e.g., policies that define local public offices as separate service providers, a condition under which their position as provider could be challenged if performance standards are not met) or by policies that support the development and maintenance of a pool of potential service providers (Sheets & Stevens, 1992). In cases where there are small provider pools, policies favoring certain competitive contracting models may also may provide an option for enhancing contestability (Hatry, Voytek, & Holmes, 1989).

e) Market oriented WFD systems have a quality, customer-service, and results-oriented focus. Achieving this means establishing a system of compatible outcome-based performance standards for all WFD programs. These standards play a central role in the performance management scheme and form the basis of supplier certification system. It is essential they be relevant to system goals, reflect both customer performance gains and attainment levels, and are consistent across programs. Market-oriented program and supplier standards should address three major performance areas: 1) trainee competency including measures of core academic competence (math, science, reading, writing), basic workplace competence (e.g., SCANS competencies), and occupational skills competence; 2) trainee outcomes such as employment or educational continuation or employment retention and earnings; and 3) customer satisfaction including measures of both trainee satisfaction and business/workplace satisfaction (Baj et al., 1996).

f) Finally, market oriented WFD systems require ongoing access to accurate information relating to stakeholder needs. This information provides the foundation for system effectiveness through change and adaptation. Systems, methodologies, and processes must be developed that provide continuous information on all stakeholder needs including the needs of individuals being served by the WFD system, consumers of the human resources produced by the system, service providers, the community, and other stakeholders.

7. *The WFD system is built on the principle of responsiveness to the economic and social goals of community.*

The success of other high performance WFD systems in the world, particularly those in Japan and Germany, underscore the importance of WFD policies and goals which accurately reflect community social, economic, and labor market values and goals (Marshall & Tucker, 1992). WFD policy and goals must be explicitly coordinated with a wide range of policies and goals including those addressing equity, racism, discrimination, and poverty; wage levels, wage spread, and employment levels; and those addressing economic development initiatives aimed at expanding or retaining existing businesses, attracting new business and industry, and the creation of new enterprises. A mutually reinforcing set of policies and goals will enable the WFD system to provide the greatest possible benefit for society. In practice, this means the creation of:

a) mechanisms tying education and training goals and activities to economic development plans;

b) mechanisms which tie education and training goals and activities to larger social goals of community (e.g., attainment for all of fundamental levels of literacy and basic skills);

c) formal processes that drive consensus building.

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8. *High performance WFD systems adopt a holistic, systems view of individual development.*

Each stage of a career brings with it new challenges and learning. The highly competitive global economy has rendered obsolete the old model of focusing on preparing people for career entry, assuming that organizations will take care of subsequent career related education and training. In today's workforce, continued career development is largely the responsibility of the individual. In addition, continuous change forces many individuals into multiple jobs and careers, bringing with it the need for re-careering and retraining. High performance WFD systems must be prepared to respond to the needs of individuals at all career stages.

In practice, this means the provision of opportunities for individuals to obtain a balanced set of skills including basic workplace literacy skills (e.g., SCANS skills), job-specific skills, and lifelong learning skills. It also means no single program can meet all of an individual's needs. Rather, individual development occurs through participation in a system of programs that address the needs of individuals in all stages of career growth and development including:

a) job/career preparation;
b) occupational entry;
c) job retraining;
d) re-careering; and
e) career exit.

The implication is that although building task related knowledge and skills are vital aspects of WFD systems, building an effective workforce requires more. Holton (1996), for example, developed a model of individual development that explicitly recognizes that effective workplace entry requires a range of skills beyond simple task skill development. The model identifies four content domains for work related learning: individual, people, organization, and work tasks. At the individual level included are personal attitudes and values necessary for success in the workplace. The people domain addresses skills needed to be able to interact effectively in the work environment. This includes managing impressions, understanding and building effective relationships with people, and learning how to be an effective subordinate and to manage the supervisor relationship. In the organization domain, learning involves understanding organizational culture, informal systems and procedures, organizational politics, and the expectations the organization has for individuals in particular roles. The work task domain addresses task related knowledge and skills including the development of learning skills necessary for staying competent both now and in the future. This model provides a comprehensive guide for WFD programming and challenges secondary and post-secondary education to effectively extend their educational responsibility beyond task related knowledge and skills to more fully encompass the other three key domains.

9. *The workforce development system is responsive to individuals at all socioeconomic levels.*

Workforce development is not just a matter of serving currently employed, recently unemployed or underemployed individuals. Persons at all level of capability and potential are needed for a strong, vibrant workforce attractive to high-performance work organizations. The WFD system must assume responsibility for assuring that all individuals have the opportunity to obtain the basic skills and accompanying certification that will lead to employment and open the door for future knowledge and skill upgrading. It is therefore vital that the WFD system be flexible and responsive enough to meet the dynamic and diverse needs of the traditionally under-served segments of the population, including those who cannot attain the required knowledge, skills, and attitudes, and accompanying credentials or certification, through existing institutions. Consequently, systems, processes, and programs must be developed and implemented which identify and integrate into the workforce all individuals who, for whatever reason, have not been served or had access to the WFD system. In practice, this means:

a) Policymakers focus on removing barriers which may make it difficult or impossible for individuals to enter and remain in the workforce. This could include the development of policies that attack discrimination against minorities, women, older workers, and the disabled; enhance access to child care services (e.g., develop a comprehensive child care policy for employer sponsored child care); make child support enforcement more effective (Governor's Human Resources Advisory Council, 1992); facilitate the provision of accessible and affordable health care (e.g., employer-based health care insurance) (Bedford & Ganzglass, 1992); or develop family responsive employment policies such as those that facilitate the use of flextime or compressed workweek (Olmstead & Trippe, 1992).

b) Programs and services utilize simplified the intake processes; provide multiple access points for intake services for all programs (e.g., electronic access to intake processes through publicly accessible computer systems such as those in public libraries or telephone and mail access to intake services); assure all services are accessible by public transportation and to individuals with disabilities; and develop strong case management processes (e.g., ones in which customers are guided through the system by a single, well-trained case manager who works with all agencies and programs) (Governor's Human Resources Advisory Council, 1992).

c) Support services are established that work to remove all barriers to individual participation in the WFD system. Some of the most frequently reported barriers to participation, particularly for lower socio-economic citizens include the absence of access to health services, adult day care, and transportation.

10. *Continuous WFD system improvement.*

Although much has been learned from national and international experiences in workforce development, many key questions remain about the what and why of program effects on particular sub-groups, the variation of effects across settings, how to structure more effective programs, and the effects of entire delivery systems on broad populations and selected groups. For example, a number of critical questions remain unanswered about welfare-to-work programs (Gueron & Pauly, 1991), school-to-work programs and systems (Stern et al., 1994), and the impact of support services on participation, completion, or outcomes in WFD programs. Policies supporting ongoing research, particular experimental and quasi-experimental research, aimed at closing these and other knowledge gaps are critical to the continuous improvement of the WFD system.

Developing, implementing, and testing new approaches to workforce development preparation is also essential to the efficiency and effectiveness of a WFD system that operates in a highly dynamic environment. The establishment of programs that support research directed at key labor market problems, special populations, or which provide incentives to providers for adopting innovative programs and technologies enhances the market responsiveness of the system. For example, strong competitive grant programs which give service providers specific and detailed information about program specifications and competitive cost and quality standards would encourage the exploration of innovative strategies to meet performance objectives. Such programs may also defend against provider monopolies, particularly in areas where there are small numbers of providers, when complemented by consumer information and voucher systems that allow consumers to select services (Sheets & Stevens, 1992).

Conclusion

The principles summarized here offer a vision for workforce development that reflect 'best practices' for high performance WFD systems. The principles, and the standards and performance criteria from which they emerged, were formulated to guide WFD system planning and development at the local, regional, or national level. The intent of the principles is to establish standards of excellence that high performance WFD systems should strive to meet. Understanding these principles and their underlying rationale is vitally important for human resource development professionals for several reasons. First, the foundation qualitites and capabilities of the human resource pool which organizations draw upon are acquired through the participation of individuals in workforce development systems. Therefore understanding the principles and mechanisms upon which effective WFD systems are built expands HRD's understanding of what is required to fully maximize individual and organizational performance. Stated differently, awareness of the core principles of WFD helps to locate the role of HRD in a larger context of workforce development and, in so doing, promotes a more comprehensive understanding of the nature and practice of human resource development. Second, human resources will play an increasingly important role in the progress of the US economy as it moves further into the post-industrial era (Johnson & Packer, 1987). The efficiency and effectiveness with which WFD systems can develop these resources to meet the needs of a dynamic workplace will, in turn, play a direct role in how our economy grows and prospers. Because the wealth of organizations and nations as a whole are inextricably linked to the skills of its workforce, HRD has a fundamental interest and role in the how the qualities, capabilities, and practices of human resource development systems are designed and implemented. To the extent our knowledge and participation in this process means the human resources we work with are better prepared and more willing and capable to perform, then HRD will be more effective in promoting individual and organizational performance.

References

Bailey, T. (1995). Learning to work: Employer participation in school-to-work programs. Washington, D.C.: The Brookings Institute.

Baj, J., Sheets, R. G., & Trott, C. E. (1996). Building state workforce development systems based on policy coordination and quality assurance. Washington, DC: National Governor's Association.

Bedford, D., & Ganzglass, E. (1992). Introduction: Excellence at work. In E. Ganzglass (Ed.), Excellence at work: Policy option papers for the National Governor's Association (pp. 1-13). Kalamozoo, MI: W. E. Upjohn Institute for Employment Research.

Council of Great Lakes Governors. (1993). Towards the Great Lakes guarantee: New direction in Great Lakes workforce development policy. Ann Arbor, MI: Corporation for a Skilled Workforce.

Governor's Human Resource Advisory Council. (1992). Strategies for opportunity: Creating a high performance workforce for Ohio. Columbus, OH: Ohio Bureau of Employment Services.

Grubb, W. N. (1995). Evaluating job training programs in the United States: Evidence and explanations. Berkeley, CA: National Center for Research in Vocational Education.

Grubb, W. N. (1996a). Learning to work: The case for reintegrating job training and education. New York: Russell Sage Foundation.

Grubb, W. N. (1996b). Creating coherent workforce preparation systems from the quagmire of education and job training. Centerfocus, 13, 1-7.

Gueron, J. M., & Pauly, E. (1991). From welfare to work. New York: Russell Sage Foundation.

Hatry, H. P., Voytek, K. P., & Holmes, A. E. (1989). Building innovation into program reviews: An analysis of service delivery alternatives. Washington, DC: Urban Institute Press.

Holton, E. F. (1996). New employee development. Human Resource Development Quarterly, 7(3).

Holton, E. F., Bates, R. A., & Naquin, S. A. (1997). A vision and strategic agenda for world-class workforce development in East Baton Rouge City-Parish. Baton Rouge: Louisiana State University.

Jacobs, R. L. (1988). A proposed domain of human performance technology: Implication for theory and practice. Performance Improvement Quarterly, 1(2), 2-12.

Jacobs, R. L. (1988). Systems theory applied to Human Resource Development. In D. B. Gradous (ed.), System theory applied to human resource development. University of Minnesota: Training and Development Research Center.

Johnson, W. B, & Packer, A. E. (1987). Workforce 2000: Work and workers for the 21st century. Indianapolis: The Hudson Institute.

Marshall, R., & Tucker, M. (1992). Thinking for a living: Work, skills, and the future of the American economy. New York: Basic Books.

National Center on Education and the Economy. (1995). Building a system to invest in people: States on the cutting edge. New York: Author.

New Jersey State Employment and Training Commission. (1996). A unifies state plan for New Jersey's workforce readiness system: Executive summary. New Jersey: Author.

New York State Department of Labor. (1996). Policy framework for New York's workforce development system: Report to the Governor. Albany, NY: Author.

Olmstead, B, & Trippe, s. (1992). The flexible workplace. In E. Ganzglass (Ed.), Excellence at work: Policy option papers for the National Governor's Association (pp. 111-150). Kalamozoo, MI: W. E. Upjohn Institute for Employment Research.

Osterman, P. (1995). Involving employees in school-to-work programs. In T. R. Bailey (Ed.), Learning to work: Employer involvement in school-to-work transition programs (pp. 75-87). Washington, D.C.: The Brookings Institute.

Rummler, G. A., & Brache, A. P. (1995). Improving performance: How to manage the white space on the organizational chart (2nd ed.). San Francisco: Jossey-Bass.

Sheets, R. G., & Stevens, D. W. (1992). State strategies for building market-based workforce preparation systems. In E. Ganzglass (Ed.), Excellence at work: Policy option papers for the National Governors' Association (pp. 71-110). Kalamazoo, MI: W. E. Upjohn Institute for Employment Research.

Swanson, R. A. (1994). Analysis for improving performance: Tools for diagnosing organizations and documenting workplace expertise. San Francisco: Berrett-Koehler.

Trott, C. E., & Baj, J. (1996). Building state systems base on performance: The workforce development experiences. Washington, D.C.: National Governors' Association.

Workforce Coordinating Council. (1995). Creating Colorado's workforce development system: Recommendations for the 21st century. Denver, CO: Author.

The Effect of Supervisor/Subordinate Relationship on Subordinate Performance, Role Ambiguity and Conflict, and Job Satisfaction

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This study examined the effect of relationships formed between supervisors and their subordinates on objective measures of subordinate performance and self-reported measures of subordinates' role conflict, role ambiguity, and job satisfaction. Data were gathered from sales representatives of a snack food company. A strong perceived relationship with supervisors was negatively correlated with role ambiguity and conflict and positively correlated with job satisfaction. No significant relationship was found between the supervisor/subordinate relationship and sales performance.

One way of thinking about the effect of leadership on subordinate performance and affective states in modern organizations is suggested by the leader-member exchange (LMX) model (Graen, Novak, & Sommerkamp, 1982) first proposed by Graen and his colleagues as the Vertical Dyad Linkage theory (Dansereau, Cashman, & Graen, 1973). In this model, the focus is on the quality of the dyadic relationship between leader and subordinate. The LMX approach to leadership, grounded in role theory, posits that leaders and individual subordinates engage in a role development process during which time understandings are reached concerning decision latitude, influence, and the degree of autonomy each subordinate has (Graen & Cashman, 1975). Leader-member exchange can also be understood in terms of social exchange theory. The leader exchanges his or her personal and positional resources in return for the organizational contributions of the subordinate. In terms of Bass' (1990) transactional and transformation leadership model (based on Burns, 1978), LMX might be considered both transactional and transformational. "It begins as transactional social exchange and evolves into transformation social exchange" (Graen & Uhl-Bien, 1995, p. 238). At its highest level, LMX allows managers to create "long-term commitment from followers to the organization" (Graen & Uhl-Bien, 1995, p. 239).

Initially, the relationship a leader develops with an individual employee is based on such elements as employee competence, dependability, and interpersonal compatibility (Duchon, Green, & Taber, 1986; Graen & Cashman, 1975; Graen & Scandura, 1987). Employees who enjoy high-quality exchanges with leaders (and, hence, are likely to become in-group members) have relationships characterized by high trust, mutual influence, support, and formal and informal rewards. Out-group members, on the other hand, have low-quality relationships characterized by low trust, formal authority, and limited support and rewards. In some studies (e.g., Graen & Cashman, 1975), a third category is identified--middle-group individuals who have neither particularly favorable nor unfavorable relationships with their supervisors. The leader-member exchange relationship tends to develop fairly quickly and remains stable (Graen & Cashman, 1975; Liden & Graen, 1980).

Supporters of LMX argue that to study leadership in organizations, the assumption that all subordinates are treated alike by the supervisor must be replaced with an approach that centers on the dyadic relationship between supervisor and subordinate. This relationship determines, in large part, the role each subordinate will play within a particular organizational unit (Graen, 1976). Individuals (leaders) having a vested interest in the role performance of another individual exert pressure on the individual in the form of a role expectation episode (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964). Through a series of such episodes, each subordinate defines what his or her role behavior will be. The relationship between LMX and performance is especially important, since "the theoretical development of the model stresses the leader's need for efficiency and performance as one cause of differential LMX relationships" (Dienesch & Liden, 1986, p. 622).

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LMX and Performance

Some researchers (e.g., Liden & Graen, 1980, Vecchio & Gobdel, 1984) have observed that performance ratings of in-group members are higher than those of out-group members. Performance ratings may be subject to rater bias, however. Supervisors' ratings of subordinates may be influenced by a variety of personal and contextual factors (Banks & Murphy, 1985; Fried & Tiegs, 1995; Ilgen, Barnes-Farrell, & McKellin, 1993). Vecchio (1982) suggests that independent performance measures, in lieu of subjective performance ratings, are necessary to test the effect of LMX on subordinate performance.

Few past studies have examined the relationship between LMX and performance, possibly because objective measures of performance are difficult to obtain, and results of these studies have been inconclusive. Graen, Novak, and Sommerkamp (1982) and Scandura and Graen (1984) reported that in-group members were higher performers when performance was measured objectively. Vecchio (1982) and Vecchio and Gobdel (1984), however, failed to detect a significant difference between objectives measures of in-group and out-group performance, although the difference reported was in the expected direction.

An advantage of studying LMX in a sales environment is that objective measures of performance (e.g., sales commission income and sales volume) are available. Castleberry and Tanner (1986) suggest that LMX theory has great potential as a tool for understanding and managing a sales force because sales performance may ultimately depend on the quality of the exchange relationship between sales manager and salesperson. Sales usually entail less direct supervision and greater latitude in directing activity than many jobs, but sales performance can differ as a function of territory allocation and sales budget or quota and could be linked strongly to a salesperson's ability to make concessions to satisfy customers--concessions that generally need to be approved by the salesperson's supervisor.

Little research attention has been directed to the interaction of the salesperson and sales manager (Churchill, Ford, Hartley, & Walker, 1985). Castleberry and Tanner (1986) reported that in-group sales people receive more pertinent information (e.g., new products, names of highly qualified prospects, proposed changes) from their sales managers and more support (e.g., better territories, more specialized training, more realistic quotas, more generous expense accounts, more concessions for customers), as well as exhibit higher productivity than out-group members. Other studies (Tanner & Castleberry, 1990; Lagace, 1990), however, produced no evidence of a positive relationship between LMX and sales performance.

Although findings from past studies have been inconclusive, it seems reasonable to expect that salespeople might earn higher commission income as a result of receiving preferred territories, specialized training, and other forms of support from a supervisor. Thus,

> *H1:* *In-group members will exhibit higher sales performance, as measured by sales commission income, than out-group members.*

Role Ambiguity and Conflict

Graen, Orris, and Johnson (1973) state that roles are ambiguously and incompletely specified and "must be completed or defined by the organization's participants" (p. 396). The role-making process is based on the exchange of support between supervisor and subordinate. As communication and work output are exchanged along with social support, roles within the relationship are defined. Both role ambiguity and role conflict have been found to be associated with low work control (Tetrick & LaRocco, 1987). Individuals experiencing role conflict believe that demands placed upon them are often excessive and contradictory in nature. Castleberry and Tanner (1986) and Tanner and Castleberry (1990) found that in-group members experienced less role conflict and role ambiguity than out-group members. A similar result was expected for this study. Hence, the following hypothesis:

> *H2:* *In-group members will report less role ambiguity and less role conflict than out-group members.*

Job Satisfaction

Studies in non-sales settings indicate that there is a relationship between job satisfaction and the in-group/out-group status of a member (Graen & Ginsburgh, 1977; Graen, Liden, & Hoel, 1982; Vecchio & Gobdel, 1984), with in-group members reporting higher levels of overall satisfaction. In addition, role stress appears to have a negative relationship with job satisfaction in sales situations (Tanner & Castleberry, 1990; Teas, 1983). Most previous studies have considered satisfaction as unidimensional. This study adds to the literature by examining seven different indices of satisfaction.

The following hypotheses concern relationships between satisfaction and LMX:

> *H3:* *In-group members will report higher scores on measures of job satisfaction than will out-group members.*

Method

Sample. Questionnaires were distributed to 154 route sales representatives of a potato chip and pretzel company located in the Middle Atlantic region of the United States. Eighty-four questionnaires were returned, for a response rate of 54 percent. Eighty questionnaires contained usable information. The remaining four were incomplete or otherwise deficient. On the basis of information supplied by corporate executives, each questionnaire was coded with a number from 5 to 1 (high to low, indicating sales commission income) prior to distribution to the representatives. Respondents were told that each questionnaire contained an income code but that individual identity could not be determined from these codes. The number of usable questionnaires received per commission category was as follows: high, 17; above average, 12; average, 20; below average, 16; and low, 15.

Leader-member Exchange (LMX) Measure. The most consistently used measure of leader-member exchange, the seven-item LMX-7 (Graen & Scandura, 1987), was used in this study. Internal reliability as measured by Cronbach's alpha was .89. Participants used a five-point scale in the Likert format to respond to seven individual items. Scores were then totaled and averaged to arrive at LMX scores. Questions included: "How well do you feel that your supervisor understands your job problems and needs?" (5, a great deal; 1, not at all), "Regardless of how much formal authority your supervisor has built into his or her position, what are the chances that he or she would be personally inclined to use that power to help you solve problems in your work?" (5, very high; 1, none), and "How would you characterize your working relationship with your supervisor?" (5, extremely effective; 1, extremely ineffective). Individuals who scored above the median were classified as in-group members; those below the median, out-group members.

Work-related Satisfaction Measure. The revised 28-item version of INDSALES (Comer, Machleit, & Lagace, 1989), developed from the original 95-item instrument (Churchill, Ford, & Walker, 1974), was used in this study to assess satisfaction. Work-related satisfaction in seven areas was measured: supervision, job, management/company policy, promotion, pay, fellow workers, and company. Reliability coefficients (Cronbach's alpha) ranged from .70 - .91. Items were scored on a 5-point scale (5, strongly agree; 1, strongly disagree). Questions included the following: "My sales supervisor lives up to his or her promises" (supervision), "My work gives me a sense of accomplishment" (job), "Top management really knows its job" (management/company policy), "There are plenty of good jobs here for those who want to get ahead" (promotion), "I'm paid fairly compared with other employees in this company" (pay), "The people I work with are very friendly" (fellow workers), and "My customers are understanding" (customers).

Role Ambiguity and Role Conflict Measures. Role ambiguity and role conflict were assessed by means of a 26-item questionnaire developed by Behrman and Perreault (1984). The first eighteen items relate to role conflict; the remaining eight items to role ambiguity. In this study, reliability coefficients (Cronbach's alpha) were .88 and .66, respectively. Items were assessed on a 1-5 continuum. Role conflict questions included the following: "My sales supervisor makes requests of me which conflict with each other," "In my job, I do things that are apt to be accepted by one person and not accepted by others," and "I frequently have much more to do than I can handle during the time available at work." Role ambiguity questions included:

"Clear, planned goals and objectives exist in my job," "I know exactly what is expected of me by my supervisors," and "When given an unfamiliar assignment, the explanation of what has to be done is very clear to me."

This study involved data only from subordinates. The inclusion of leader responses in future research might be useful in determining whether leaders and individual subordinates describe their dyadic relationships in similar or dissimilar terms.

Results and Discussion

The descriptive statistics for the measures used in this study appear in Table 1. Cronbach's alpha reliability coefficients ranged from .66 to .91 and were considered sufficiently high for research purposes (Nunnally, 1978).

Table 1. Means, Standard Deviations, and Reliability Coefficients for Measures

Description	*Mean*	*Standard Deviation*	*Reliability Coefficient*
LMX	3.51	.218	.89
Role Ambiguity	2.30	.416	.66
Role Conflict	2.50	.326	.88
Satisfaction with:			
Supervisor	3.49	.277	.81
Work	3.45	.169	.91
Management	3.01	.070	.87
Promotion	2.48	.304	.79
Pay	2.80	.361	.73
Coworker	3.76	.237	.70
Customer	3.46	.112	.79

Note: All scores are based on a five-point scale.

Hypothesis 1 predicted a positive relationship between in-group/out-group status and sales performance as operationalized by sales commission income. Biserial correlations (r_{bis} = .02, *ns*) indicated a negligible relationship between LMX and sales commission income. Thus, Hypothesis 1 was not supported.

Hypothesis 2 posited that in-group members would report less role ambiguity and less role conflict in their jobs. Biserial correlations indicated a significant negative relationship between in-group\out-group status and role ambiguity (r_{bis}= -.47, $p < .001$) and between in-group\out-group status and role conflict (r_{bis} = -.42, $p < .01$). Thus, Hypothesis 2 was supported.

Hypothesis 3 stated that in-group members would report greater satisfaction than out-group members on seven indices of satisfaction. Biserial correlations indicated support for Hypothesis 3 for three of the seven dimensions of satisfaction: supervisor satisfaction (r_{bis} = .78, $p < .001$), management satisfaction (r_{bis} = .34, p = < .001), and satisfaction with promotion (r_{bis} = .43; p= <.001). Correlational data pertaining to Hypotheses 3 appear in Table 2.

Table 2. Correlations Among Leader Member Exchange, Role Ambiguity, Role Conflict and Satisfaction Measures
N=80

Description	*LMX*	*Role Ambiguity*	*Role Conflict*
Satisfaction with:			
Supervision	.78***	-.45***	-.40***
Work	.12	-.25*	-.29**
Management	.34**	-.29**	-.44***
Promotion	.43***	-.11	-.34***
Pay	.18	-.08	-.11
Coworker	.06	-.15	-.22*
Customer	.18	-.05	-.11

*$p < .05$, **$p < .01$, ***$p < .001$

LMX and Performance. There was no significant relationship between in-group/out-group status and performance. This finding is consistent with those of two recent studies (Lagace, 1990; Tanner & Castleberry, 1990), although Castleberry and Tanner (1986) reported that in-group members exhibited higher performance. Certainly more research is needed on the relationship between leader-member exchange and subordinate performance; however, the results of this study and the two most recent studies (Legace, 1990; Tanner & Castleberry, 1990) appear to indicate that, for outside salespeople, leader-member exchange has no significant relationship to objective measures of performance. The reasons for this lack of relationship are interesting to explore, especially in terms of implications for future studies.

First, in a sales organization, salespersons typically perform almost all their work away from their supervisors' physical presence. This lack of an on-going face-to-face relationship may, by itself, explain the lack of impact the supervisor has on direct sales by the sales staff. The salesperson's own initiative and sales ability may be of primary importance. As technology increasingly allows more and more employees to work at geographically-dispersed locations, the distance relationship shared by supervisors and sales staff may become more common for employees working in a variety of types of jobs. Future research should examine the effect of LMX on performance when opportunities to engage in a day-to-day relationship are limited.

Second, although LMX exchange posits that in-group members receive more support from supervisors, support, for the participants in this study, may not have translated into their receiving better sales territories. In-group/out-group relationships do not take an excessive amount of time to develop (Lagace, 1990). A salesperson who has been with the company for a short period of time may be an in-group member but not have the seniority needed to be assigned to the larger more productive routes. It seems reasonable that new people, regardless of their relationship with their supervisor, would not do as well as established sales people with more productive territories. Since demographic information on longevity with the company was not collected on this sample (because of a concern that identifying information would negatively affect response rate), we have no way of controlling for this effect.

A third explanation is closely related to the territory issue addressed above. There is an assumption implicit in LMX theory that a subordinate's supervisor has the ability to provide substantial resources such as extensive training, generous expense accounts, customer perks and concessions, and/or other tangible measures of support to favored subordinates. This may not have been the case in the sales organization in this study and certainly, sales supervisors are not the only managers who have constraints placed on their allocation of resources and rewards. In organizations with matrix structure, for example, a project supervisor often has little control over the organizational rewards given to her or his subordinates. Those decisions are made by functional managers. In today's climate of budget cuts and downsizing, supervisors have fewer resources with which to reward subordinates, favored or otherwise. The effect of these diminished resources on the balance in the leader-member exchange relationship remains to be seen.

Regardless of whether future research finds that LMX has a direct effect on performance, LMX may have an indirect effect on performance that is not readily apparent. For instance, a supervisor who acts as a mentor may influence a subordinate's future job performance. One who introduces a subordinate to a variety of individuals within and/or outside the organization could substantially increase the subordinate's professional network in terms of colleagues, superiors in the organization, and potential clients. In this way, the initial transactional nature of LMX may evolve into the transformation relationship suggested by Graen and Uhl-Bien (1995). Such possibilities merit further inquiries.

LMX and Role Ambiguity/Role Conflict. In this study, in-group members reported less role ambiguity than out-group members. These results support earlier findings (Tanner & Castleberry, 1990; Tanner, Dunn, & Chonko, 1993) that in-group/out-group status is negatively related to role ambiguity. In-group-members have a better understanding than out-group members of role requirements. One explanation may be that in-group members engage in more frequent and more precise communication with supervisors than do out-group members. Also, it may be that in-group members are not as apprehensive as out-group members about approaching supervisors with problems encountered on the job.

In-group members also reported less role conflict than out-group members. This finding is consistent with previous research (Lagace, 1991; Tanner & Castleberry, 1990). Because in-group members receive more attention and support than out-group members (Vecchio & Gobdel, 1984), in-group members are expected to experience less role conflict. The findings of this study support that view. Tanner and Castleberry (1990) state that as exchange quality improves, so should understanding of role requirements. This greater understanding should reduce perceptions of role stress.

LMX and Satisfaction. The relationship between in-group/out-group status and satisfaction received partial support for three of the seven dimensions of satisfaction. Not surprisingly, the strongest correlation in this study was that between in-group/out-group status and satisfaction with supervisor. It appears that in-group members, who have a more positive relationship with both supervision and management, view their positions in the organization and their likelihood for promotion more favorably than do out-group members. A supportive supervisor-subordinate dyadic relationship, then, may help to reduce turnover. Graen and Ginsburgh (1977) and Graen, Liden, and Hoel (1982) observed less turnover when leader-member exchange relationships were strong. One should exercise caution, however, not to overemphasize the link between turnover and leadership. Mathieu and Zajac (1990) and Bycio, Allen, and Hackett (1995) found that characteristics of the organization had a stronger association with turnover than did aspects of transformational leadership.

The relationship between in-group membership and promotion satisfaction, however, should also lead organizations to examine performance evaluation procedures to ensure that favored employees are not receiving better evaluations than their performance merits, especially in light of the nonsignificant relationship between LMX and objective measures of job performance.

Implications for HRD

In today's economy, more and more businesses are searching for non-monetary ways to improve employee performance, morale, and job satisfaction. Supervisory training programs that emphasize the importance of conveying clear, concise job roles and responsibilities and establishing open lines of communication with all employees might help in all three areas. Attention also could be focused on supervisory behaviors and practices that lead employees to believe that they have a favorable (or unfavorable) relationship with their supervisors. An important finding in this study was that in-group members were more satisfied with management, supervision, and promotion policies, and that they reported less role ambiguity and role conflict than out group-members.

As more employees work away from the direct supervision of their managers, more information is needed on the effect of that lack of face-to-face interaction. Discussions in organizations about what subordinates want and need from their supervisors would be useful for

HRD professionals facing decisions about how to help employees work successfully in distant locations.

This study also raises questions relevant for career development. Do in-group members receive better mentoring and greater exposure to organizational and external networks than out-group members? What effect do these opportunities have on long-term job performance?

References

Banks, C. G., & Murphy, K. R. (1985). Toward narrowing the research practice gap in performance appraisal. Personnel Psychology, 38, 335-345.

Bass, B. M. (1990). *Bass & Stogdill's Handbook of leadership* (3rd ed.). New York: Free Press.

Behrman, D. N., & Perreault, W. D. (1984). A role stress model of the performance and satisfaction of industrial salespersons. *Journal of Marketing, 48*, 9-21.

Burns, J. M. (1978). *Leadership*. New York: Harper & Row.

Bycio, P., Allen, J. S., & Hackett, R. D. (1995). Further assessments of Bass's (1985) conceptualization of transactional and transformational leadership. *Journal of Applied Psychology, 80,* 468-478.

Castleberry, S. B., & Tanner, J. F., Jr. (1986). The manager-salesperson relationship: An exploratory examination of the vertical-dyad linkage model. *Journal of Personal Selling & Sales Management, 6,* 29-37.

Churchill, G. A. Jr., Ford, N. M., Hartley, S. W., & Walker, O. C. Jr. (1985). The determinants of salesperson performance: A meta-analysis. *Journal of Marketing Research, 22,* 103-118.

Churchill, G. A. Jr., Ford, N. M., & Walker, O. C. Jr. (1974). Measuring the job satisfaction of industrial salesmen. *Journal of Marketing Research, 11,* 254-260.

Comer, J. M., Machleit, K. A., Lagace, R. R. (1989). Psychometric assessment of a reduced version of INDSALES. *Journal of Business Research, 18,* 291-302.

Dansereau, F., Cashman, J., & Graen, G. (1973). Instrumentality theory and equity theory as complementary approaches in predicting the relationship of leadership and turnover among managers. *Organizational Behavior and Human Performance, 13,* 46-78.

Dienesch, R. M., & Liden, R, C. (1986). Leader-member exchange model of leadership: A critique and further development. *Academy of Management Review, 11*, 618-634.

Duchon, D., Green, S. G., & Taber, T. D. (1986). Vertical dyad linkage: A longitudinal assessment of antecedents, measures, and consequences. *Journal of Applied Psychology, 71,* 56-60.

Fried, Y., & Tiegs, R. B. (1995). Supervisors' role conflict and role ambiguity differential relationship with performance ratings of subordinates and the moderating efffect of screening ability. *Journal of Applied Psychology, 80,* 282-291.

Graen, G. (1976). Role-making processes within complex organizations. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 1201-1245). Chicago, Rand McNally.

Graen, G., & Cashman, J. (1975). A role making model of leadership in formal organizations: A developmental approach. In J. Hunt & L. L. Larson (Eds.), *Leadership frontiers* (pp. 143-165). Kent, OH: Kent State University Press.

Graen, G., & Ginsburgh, S. (1977). Job resignation as a function of role orientation and leader acceptance: A longitudinal investigation of organizational assimilation. *Organizational Behavior and Human Performance, 30,* 109-131.

Graen, G., Liden, R., & Hoel, W. (1982). Role of leadership in the employee withdrawal process. *Journal of Applied Psychology, 67*, 868-872.

Graen, G., Novak, M., & Sommerkamp, P. (1982). The effects of leader-member exchange and job design on productivity and satisfaction: Testing a dual attachment model. *Organizational Behavior and Human Performance, 30,* 109-131.

Graen, G., Orris, J., & Johnson, T. (1973). Role assimilation in a complex organization. *Journal of Vocational Behavior, 3,* 395-420.

Graen, G., & Scandura, T. A. (1987). Leadership as organizing: A critique of leadership instruments. *Management Communication Quarterly, 4,* 541-570.

Graen, G. B., & Uhl-Bien, M. (1991). The transformation of professionals into self-managing and partially self-designing contributions: Toward a theory of leader-making. *Journal of Management Systems, 3*(3), 49-54.

Ilgen, D. R., Barnes-Farrell, J. L., & McKellin, D. B. (1993). Performance appraisal process research in the 1980s: What has it contributed to appraisals in use? *Organizational Behavior and Human Decision Processes, 54,* 321-368.

Kahn, R., Wolfe, D., Quinn, R., Snoek, J., & Rosenthal, R. (1964). *Organizational stress.* New York: Wiley.

Lagace, R. R. (1990). Leader-member exchange: Antecedents and consequences of the cadre and hired hand. *Journal of Personal Selling and Sales Management, 10,* 11-19.

Lagace, R. R., Goolsby, J. R., & Gassenheimer, J. B. (1993). Scaling and measurement: A quasi-replicative assessment of a revised version of INDSALES. *Journal of Personal Selling and Sales Management, 1,* 65-72.

Liden, R. C., & Graen, G. (1980). Generalizability of the vertical dyad linkage model of leadership. *Academy of Management Journal, 23,* 451-465.

Mathieu, J. E., & Zajac, D. M. (1990). A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment. *Psychological Bulletin, 108,* 171-194.

Nunnally, J. (1978). *Psychometric methods,* New York: McGraw-Hill.

Scandura, T., & Graen, G. (1984). Moderating effects of initial leader-member exchange status on the effects of a leadership intervention. *Journal of Applied Psychology, 69,* 428-436.

Tanner, J. F., & Castleberry, S. B. (1990). Vertical exchange quality and performance: Studying the role of the sales manager. *Journal of Personal Selling and Sales Management, 10,* 17-27.

Tanner, J. F., Dunn, M. G., & Chonko, L. B. (1993). Vertical exchange and salesperson stress. *Journal of Personal Selling and Sales Management, 13,* 27-35.

Teas, R. K. (1983). Supervisory behavior, role stress, and the job satisfaction of industrial salespeople. *Journal of Marketing Research, 20,* 84-91.

Tetrick, L. E., & LaRocco, J. M. (1987). Understanding, prediction, and control and moderators of the relationships between perceived stress, satisfaction, and psycholoigical well-being. *Journal of Applied Psychology, 72,* 538-543.

Vecchio, R. P. (1982). A further test of leadership effects due to between-group variation and within-group variation. *Journal of Applied Psychology, 67,* 200-208.

Vecchio, R. P., & Gobdel, B. C. (1984). The vertical dyad linkage model of leadership: Problems and prospects. *Organizational Behavior and Human Performance, 34,* 5-20.

A Pilot Study of Career Development Issues of African-American Women Serving as First-line Supervisors

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This study explored the career development issues of African-American women who are first-line supervisors. A qualitative research design was used in which face-to-face interviews were conducted with a sample of five first-line supervisors. The questions focused on the participants' perceptions of the organization's career development program; factors that motivate them to perform on the job; and factors that hinder and facilitate their career progress. The study revealed that this group of women face unique challenges. Factors for success and implications for HRD are discussed.

Human resource development (HRD) practitioners are reevaluating how they develop their employees to achieve and maintain a competitive advantage (Noe, Hollenbeck, Gerhart, & Wright, 1994). One group of employees that serve critical roles within the organization is the first-line supervisor. This group is responsible for the employees who produce the organization's goods and services (Harrison, 1994).

Increasingly African-American women are becoming a larger part of the supervisory ranks because opportunities that were previously denied to minorities and women are now attainable (Fagenson & Jackson, 1993). As more women enter the workforce, they will accumulate work experience and complete management and professional education programs (Larwood & Wood, 1995). African-American women may have differing career development experiences, especially if programs are unstructured. Therefore, they may require a different approach to their career development process.

Problem Statement

The career development of individual supervisors is very important to the success or failure of an organization. First-line supervisors are the most important management level of the organization because they have contact with the operating employees, the people who ultimately determine the success of the organization (Harrison, 1994).

Previous research has shown that employees benefit differentially from career development experiences provided by their organizations, and that race and gender may account for some of these differences (Diamond, 1987; Marshall, 1994; Betters-Reed & Moore, 1995). In particular, an increasing number of African-American women, as a category of employees, are becoming more and more prevalent in organizations, especially at the first-line supervisory levels (US Department of Labor, 1991). This is often perceived as good by the organizations because they present new opportunities and challenges (Cox & Blake, 1991). However, the contributions of these individuals are likely to be diminished, in part, because of whatever perceptions they might have of the career development process and programs of their organizations.

Supervisory development is critical to the successful organization. Because of their unique background and views, African-American women could be perceived to view career development offerings differently from their white counterparts merely because of their differences in experiences, perceptions, and responses based on gender and race. More needs to be known about the career development of African-American women as first-line supervisors, because knowing this will help organizations develop appropriate career development strategies for all employees.

Purpose

The purpose of this study was to identify the perceptions, motivations, barriers and facilitators of African American women's career development in the retail industry. From the organization's

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perspective, this information is critical for at least two reasons. First, it would provide greater insights on the career motivations of African-American women and their perceptions of the organization's approaches to career development. Second, this information would help human resource development practitioners plan and implement more effective career development programs, which would benefit African-American women and other front-line supervisors.

For the purpose of this study, the supervisor was a first-line person who managed nonmanagement employees to achieve the objectives of the organization (Harrison, 1994). The supervisor reported to a mid-management or upper management person.

Questions for Investigation

Five female African-American first-line supervisors were chosen to address the following questions:

1) What are the perceptions of African-American women on the career development programs in the organizations?
2) What motivates African-American women to perform on the job?
3) What factors serve as barriers to career progress do African-American women encounter?
4) What factors facilitate the career progress of African-American women?

Method

The individual case study research design was used (Yin, 1994; Patton, 1990). The purpose of the case study is gather comprehensive, systematic, and in-depth information (Patton, 1990) about each female African-American first-line supervisor. This allowed for face-to-face interviews with a purposeful sample of the supervisors. The interviews produced qualitative data of their experiences, beliefs, attitudes and thoughts.

Instrument. An interview schedule was developed to collect data (Patton, 1990). The interview schedule consisted of questions which were divided into five sections: career motivation, career development, barriers, facilitators and personal information.

Sample and Data Collection. Research was conducted at a large mid-western organization which receives, stores, and ships retail and catalog merchandise. The researcher conducted face-to-face interviews with five first-line supervisors. The interviewer contacted the human resource department of several large organizations that had a large number of front-line employees, who reported to front-line supervisors. One organization was willing and able to work with the researcher at the proposed time. The organization had seven first-line African-American supervisors who were women. The researcher wanted to conduct interviews with all seven of the supervisors, but the busy schedules of two of them made it impossible.

Initial contact was made with the organization through a mid-manager of Human Resources Management Department. A proposal of research study and a copy of the interview schedule were handed to her. It was through her that the appointments for interviews were made. The interviews were conducted on site in a small conference office. The interviewees were aware of the purpose and intentions of the study. The interviews lasted approximately one hour and focused on the perceptions of the supervisors on the career development strategies of the organization. The researcher used the interview schedule to guide her in the questions. Opportunities were given for the probing and clarification of certain responses. The interviewees agreed to be tape-recorded.

The data was content analyzed. Content analysis is conducted by "identifying, coding, categorizing the primary patterns in the data" (Patton, 1990, p. 381). The data from the interview was first arranged into topics or files. The information was edited and redundancies were sorted out and parts were fitted together. The recurring themes in the data became the topics. To ensure the trustworthiness of the data, the researcher collected information from multiple sources, reviewed documents, and conducted observations. After the analysis of the data, member checks were done with the participants to verify the findings.

Description of Participants. The supervisors' ages ranged from 27 to 58 years. One had recently completed her MS in Human Resource Management and one had a BS. The other three had completed high school. Their overall supervisory experience ranged from two and a half years to ten years. At this organization, their supervisory experience ranged form two and a half years to seven years. They supervised between eight and 65 workers. Three of the participants were married, one was single and one was divorced. Three of the participants had children. Their ages ranged from one and a half to 40 years.

The new supervisors held different positions with the organizations. Two were hired as supervisors, while the other three started out in various associate positions. One worked as a supervisor for various departments, while the other was hired into the department in which she currently serves as supervisor. The supervisors had diverse working backgrounds in the garment and retail industry before securing their present jobs. Their previous jobs included inventory receiving, customer service, staff assistant, packing and shipping, word processing, and inventory taker. Eighty percent of the supervisors were hired as front-line employees. Twenty percent were hired at the supervisory level.

The supervisors attributed much of their success in their current role to holding positions similar to ones held by people they supervised. The supervisors explained that their previous jobs helped them to gain the necessary experience and skills to succeed at various levels an in various departments in the organizations. They learned the operation of the organization, and enhanced their interpersonal and communication skills enabling them to interact with other staff members and management. They also learned responsibility and commitment. For example, one supervisor stated, "Now that I am a supervisor over a section that helps the warehouse, my previous job gave me the warehouse experience and helped me to see all aspects of the operations. It gave me important background information."

Findings

The findings of the study are presented with reference to the questions which guided the research. The questions were presented four major sections: career development, motivation, barriers and facilitators.

Perceptions of Career Development. The participants were asked to explain how they obtained their present job.

Attitude of Others. A number of themes emerged concerning the attitudes of others in the organization. These included the respect of peers and their attitudes related to the supervisory position. They expressed the challenge of gaining the trust and confidence of their previous peers who are now their employees. One supervisor stated, "I started working with them, and at some point I became their supervisor. I think people have a preconceived notion on how you are going to treat them when you become a supervisor." Another supervisor expressed, "I think a lot of time in this business that unless you are directly linked to making money for the company, you do not get respect."

One sentiment expressed by all the participants was that they were always proving themselves to management. One supervisor stated, "I always felt that I had to be better than the rest. I always had to prove that I was on top of things. You cannot give 90% because people will say you got the job because of Affirmative Action." The participants perceived that they had to perform 150% above their white counterparts to be considered worthy of their positions. There is a heightened awareness of how their actions affect others, and how other's perceptions affect them.

How Opportunities are Afforded. Each participant demonstrated self -initiated behavior to seek out and pursue job advancement opportunities. There was an unstructured process of encouragement with the exception of job posting activities. When they learned of a job opportunity, they completed the necessary paperwork and executed follow-up activities. They all expressed receiving encouragement and support from their former manager or supervisor. Eighty percent of the participants received job rotation. One supervisor stated, " I was placed on various jobs and worked in different areas, and different positions, and I did a good job. I got a good report back from my supervisor on my work, attitude and personality, so when another job came up I applied for it and got it. I learned about computers and became a trainer, from there I was placed on special assignments and wrote manuals....I mastered each job and moved on the next. When I was in my eight year with the company, I had already worked twenty one jobs."

The participants were self-taught. One stated, "The things that I have learned, I took the initiative to go out and take that risk to learn the things that I needed." They took the initiative to find out available training and development workshops and seminars opportunities, "I found seminars and workshops that I was interested in." They were not afraid to ask questions and learn from others. They took the time to find out about opportunities and learn the organization's culture and policies. One supervisor stated. "I learned by listening and doing. Whenever I wanted to learn about something, I bought the book and learned."

The participants self-initiated their career development process by pursuing information on training and development. The human resource department also offered unstructured approach to supervisory development with job rotation as the main tool.

Motivation. Each participant was asked to identify the main factors that contributed to their success on their job.

Intrinsic Factors. The supervisors were essentially satisfied with their present positions, but may consider mid-level positions if offered. Most satisfied were the ones who worked for the organization for over 10 years. All the supervisors stated that the main factors that have kept them motivated are their service and commitment to others and to the job. Eighty percent acknowledged that they enjoyed working with others and wanted to see them succeed. Eighty percent declared the challenges of the job keep them motivated. This is especially true when they have the tools and support to succeed. They had also set personal goals for themselves and these goals have kept them motivated.

Career Planning. A common theme amongst the participants was that they had a strong focus on their careers. They were actively involved in taking classes, reading materials related to their field and involving themselves in workshops and seminars to enhance their skills. The two participants with college degrees appeared to have the greatest amount of determination in achieving mid- and senior-level status.

The participants' involvement in training activities and commitment to keeping abreast of the job issues affecting them were factors that show a high level of motivation. They were preparing themselves for greater responsibility and reward.

Factors serving as Barriers. Each participant was asked to identify the barriers from front-line worker to first-line supervisor.

Lack of opportunity. Two issues emerged on the lack of opportunity. One was the issue of an informal, unstructured career development and preparation process, and secondly, the perception that African-American women are outsiders of that process. They perceived there are limited opportunities for the women to progress through the organization. They also perceived the organization as belonging to the "old boy's network" whereby all minorities are excluded in achieving executive management status.

Discrimination. These women had strong perceptions that African-Americans always have to prove themselves because they are fighting against negative stereotypes. They explained that the organization has not made any attempt to implement diversity program to dispel stereotypes and negative images of minorities. Eighty percent of the participants reported that they have encountered discrimination on their jobs due to race. The women noted that sexual discrimination was not a major concern for them.

Inadequate Supervisor Preparation. The human resource department relied on informal and unstructured preparation for the career development of its' employees. The supervisors do not have a sense of what the organization wants or expects from them. Their perception of the training programs that are offered was that they are not comprehensive and do not address their needs. Although the participants in this study possessed self-confidence, high aspirations, and solid skills and experience, 60% do not necessarily want to advance to mid-management positions.

The workers depended on their own initiatives to seek out information on training and development programs both internal and external to the organization. They conducted a self needs assessment to enable them to become better equipped at supervision, and to acquire the skills and knowledge necessary to progress through the organization.

Lack of Well Articulated Requirements. The female supervisors sensed that people who are deserving of jobs are not getting them. This seemed to be the result of management not clearly articulating and defining the criteria for promotion. Sixty percent of the supervisors perceived that management tends to overlook associates who do have a college degree. However, the other 40% who have college degrees also felt that management neglected to promote African-American regardless of education and experience. An important theme that is expressed by 80% of supervisors is that management may attempt to set people up for failure, by promoting them to jobs that they are inadequately prepared to perform.

Factors that Facilitate Career Development. Each participant was asked to identify the factors that facilitated their career development.

Personal Characteristics. The women believed that their strong work ethic and experience helped them the most. Their high self esteem and perseverance were also key factors. One supervisor stated, "I believe you have to give your all even if it is something you don't like. You should always give 110%. I always gave 200%, because I know that one day I will be rewarded." They also believed that their interpersonal and communication skills such as the ability to work on a team and confer with various levels of management were important factors.

Experience/Education. The women believed that their background in the retail industry assisted their progression in the organization. Their tenure ranged from five years to 23 years. They possessed the technical skills, knowledge of the organization and good track records. The 40% who have college degrees attributed that as a factor in facilitating their careers. Though the participants were experienced and learned what they needed to do progress in the organization, if there are limited in their experience they were less likely to learn what is needed to progress.

Mentor. Mentoring is important to the development of supervisors and their advancement in the organization. Not only does it provide support, but also challenges and provide much needed education, experience and influence in the quest for a rewarding job as a supervisor. Eighty percent of the women had mentors who encouraged and supported them The mentors gave them information on the organization. The mentors also shared personal experiences with the organization. They taught them how to manage and organize their work. They taught most of what they know. The mentors were individuals who they trusted, respected and who had high integrity. One supervisor's mentor was an African-American male, one had a whiter male, one had an African-American female, and two had white females.

Factors necessary for Success. The participants were asked to identify factors that are important for them to succeed

Process Used to Prepare for Career Progression. Even though the organization believed in promoting from within, some of the women believed that education is important to progress to certain levels of management. Also education provides easier access. They advised potential supervisors to take advantage of all workshops and seminars the organization offers. They should also attend seminars outside of the organization.

Opportunity to Progress. It is necessary for women to take the initiative to learn about the organizational culture, and the opportunities that exist. It is worthwhile to find out what the organization looks for in a supervisor and get the skills, experience or education needed. The women should be responsible for their actions and to know people they work with. It is also necessary to build rapport and gain the respect and trust of management, colleagues, and associates.

Work. They recommended that the tasks, including the undesirable ones, should be performed well. They perceived hard work is important to achieve some level of respect. One should be prepared to start at the bottom because a college degree does not guarantee you immediate considerations for management.

Success after Progression into Possession. The female first-line supervisors believed that the HRD should identify the gaps between the required competencies of the supervisors and the measured knowledge, skills, and attitudes of the supervisors. Then HRD should devise a plan and supervisory training based on these needs. The participants postulated that HRD should provided training or supervisor and managers on how to relate subordinates. They also expressed concern on the lack of ongoing supervisory and technical training. Diversity training is also essential so that everyone can appreciate different cultures and background. The organization should find out the capabilities of the individuals and select people fairly and equitably.

Supervisory Forums. The participants agreed that HRD should hold meetings with supervisor so that they can voice concerns and these meetings will also provide opportunities to learn from each other's experiences. They support the view that management should get input from minorities as to what can help to improve the efficiency of the organization. The participants recommended communication regarding changes should done regularly and it should be consistent at all levels, especially with rules and regulations. They challenged management to communicate with employees and to explore ideas on improving the organization.

Conclusions

HRD should better articulate requirements for moving front-line workers to positions of leadership. Training and development efforts were not considered important factors to assist in the career progression of this group of women. They were not necessary and the efforts were perceived to be biased in favor of white women and men. The women perceived that the career development efforts of the organization have failed to address their needs. They viewed the organization as being uncommitted to growth and development of their employees, especially African-American women. Research has shown that when African-Americans feel a part of the social structure, or feel supported, they tend to have better employment experiences. For example, Burke (1991) found that among 81 minority managers and professionals employed in organizations that were supportive of minorities were more satisfied with and committed to their organizations. These minority managers also participated in more useful development and training activities and had more optimistic career aspirations.

HRD does not encourage participation in educational and training programs and does not inform them about job opportunities within the company. Promotions that were offered to them were viewed with distrust. They believed that the organization wants to see them fail by offering them jobs for which they are ill-prepared The women in the study have worked long and hard at the operational level before moving into first-line supervisory levels, but have plateaued at those positions. Research has shown that African-American women have held steady and have lagged behind white women in moving into middle-management positions (Howard-Vital, 1993).

The organization should take a more active approach to career development by promoting opportunities advancement and encouraging full use of educational benefits. Seeking opportunities should be a shared responsibility between the organization and the supervisor (Noe et al., 1994). The first-line supervisor face a multifaceted learning experience. The embedded group theory is displayed here that the organizations supports the value of the larger population, and this send the message of how the organization communicates with minorities (Ivancevich & Matteson, 1990). According to Crandall (1988) organizations must develop an environment that will provide different formal and informal experiences, group sessions and individual counseling for all employees.

The study also suggested that the main sources of motivation for the women are external to the work environment. These include reliance upon family and organizations such as the church and the Urban League. The women showed commitment to the people they supervised and the opportunity to work with these individuals was an important motivating factor. The researcher found this to be interesting that they did not consider wages nor commitment to work as motivating factor. The motivation displayed by these women is intrinsic in nature and is defined as the "extent to which workers are motivated for reasons other than financial rewards" (Lawler,1973, p. 50). The results of the study showed that the supervisors found their jobs interesting and challenging and were willing to stay in that capacity.

The participants agreed that mentors facilitated their career progress. Three of the women had mentors of the same ethnic background of which one was of the same gender. The other two had mentors who were white and female, or white and male. The literature suggested that there is a lack of mentors for African-American women because their numbers are still few in management positions (Morrison & Von Glinow, 1990). According to Howard-Vital (1993), mentors tend to select protégés persons who are of the same gender and who share with themselves a number of social and cultural attributes or background such as race, ethnicity, religion and social class.

The literature suggested that mentoring relationships are needed for the successful advancement for women in organizations (Ragins, 1989; Fagenson, 1993). The literature also suggested that same sex and same race mentoring are more effective than cross-sex and cross race mentoring (Thomas, 1989). When race and gender factors are considered, a different set of consequences often emerged. It has been found that cross-race relationships take longer to initiate, are more likely to end in an unfriendly fashion, and provide less psycho-social support than same race relationships (Thomas, 1989). However, the dilemma that exists for African-American women is that there are few of them in management positions (Ragins, 1989). Therefore, African-American women experience taboos across gender and race and they are the most difficult to sustain (Thomas, 1989). Contrary to the literature, the participants spoke highly of their cross-sex and cross-race mentors and had described their experiences as rewarding and fulfilling.

Greenhaus, Parasuraman, and Wormley (1988) found differences in career success based on gender and race, with African-American women having more negative experiences than any other group. This study suggests that barriers still exist for the African American women. Racism is the main barrier cited, followed by gender. Studies have suggested that women and minorities receive less social support, encounter more stressful situations, report more treatment discrimination, and perceive less opportunity for advancement than do their white male counterparts. (Copeland, 1988). It is reasonable to think that people are motivated to work more productively when they believe they can be more successful. Organizations that fail to make appropriate changes to more successfully use and keep employees from different backgrounds can expect to suffer a significant competitive disadvantage than those organizations that do. The bottom line is lost profit.

HRD needs to recognize the lack of adequate career development strategies and insensitivity to cultural and racial differences. In doing so, management should develop systematic policies to help eliminate them. The barriers noted here are those recognized by numerous researchers as the ones affecting other women (Fagenson, 1994; Morrison & Von Glinow, 1990). Some of the barriers are unique to African-American women.

This study revealed that this group of African-American women must still contend with the issues of sexism and racism. A recent study confirmed that a more subtle form of racism exists in the American workplace (Brief, Buttram, Reizenstein, Pugh, Callahan, McCline, & Vaslow, 1997). These issues, however have not deterred them for exploring and taking advantage of the opportunities presented, and remaining steadfast in their aspirations.

Implications for HRD Research

It is clear that additional research is required to clarify the concerns of female first-line supervisors. I therefore propose a research agenda that will expound on the career development of first-line supervisors.

This pilot study revealed some interesting issues facing first-line supervisors, specifically African-American women. The study utilized a sample of five women and this by itself is limiting. It is clear that additional research is required to clarify the relationship among face and gender, management, and job performance. In addition, research is needed to clarify the advantage for organizations to advance African-American women versus women in general.

There is a plethora of information on women in management, concerning their experiences, career development strategies, barriers, and facilitators. This focus maybe due to the fact women made up 42% of all management positions in 1992 (Larwood & Wood, 1995), whereas 3% were found in senior management positions (Marlow, Marlow, Arnold,1995). The low number has generated interest in women who are in mid- to senior- level positions. However, there is a paucity of information regarding women in first-line supervisory positions. There is also little research of information regarding African-American women in management (Hackett, Lent, and Greenhaus, 1991). Research that produce theoretical models are needed to address African-American women experiences and career development that will help us understand the different experiences of women in various aspects of management. This will also help us to understand the status of in supervisory management by addressing the ways organizations assign limited opportunities to African-American women, and addressing questions such as: Does management set African-American women up for failure?

References

Betters-Reed, B. & Moore, L.(1995). Training women for management: Changing priorities. *Journal of Management Development,* 14(2), 7-22

Brief, A.P., Buttram, R., Reizenstein, R., Pugh, S., Callahan, J., McCline, R. & Vaslow, J. (1997). Beyond good intentions: The next step toward racial equality in the workplace. *Academy of Management Executive,* 11(4), 59-72.

Burke, R.J. (1991). Work experiences of minority managers and professionals: Individual and organizational costs of perceived bias. *Psychological Reports,* 69(3), 1011-1023.

Copeland, L. (1988). Making the most of cultural differences at the workplace. *Personnel,* 52-60.

Cox, T. & Blake, S. (1991). Managing cultural diversity: Implications for organizational competitiveness. *Academy of Management Executive,* 5, 45-56.

Crandall, R.E. (1988). First-line supervisors: Tomorrow's professional. *HR Focus,* 65(11), 24-31.

Diamond, E. E. (1987). Theories of career development and the reality of women at work. In B. Gutek and L. Larwood (Eds.), *Women's Career Development,* Newbury Park: Sage.

Fagenson, E. (1993). Women in management: Trends, issues and challenges in managerial diversity. Newbury Park, CA: Sage.

Fagenson, E. & Jackson, J. (1993). The status of women managers in the United States. *International Studies of Management and Organization,* 23(2), 93-112.

Greenhaus, J., Parasuraman, S. & Wormley, W. (1988, August). *Organizational experiences and career success of black and white managers.* Paper present at the annual meeting of the Academy of Management, Anaheim, CA.

Hackett, G., Lent, R. W. & Greenhaus, J.H. (1991). Advances in vocational theory and research: A 20-year retrospective. *Journal of Vocational Behavior,* 38, 3-38.

Harrison, E. (1994). The case for supervisor involvement. *Industrial Management,* 36(6), 25-27.

Howard-Vital, M.R. (1993). African-American women and mentoring. *ERIC*

Ivancevich, J. & Matteson, M. (1990). *Organizational Behavior and Management.* Homewood, IL: Irwin.

Larwood, L. & Wood, M. (1995). Training women for management: changing priorities. *Journal of Management Development, 14*(2), 7-22.

Lawler, E. (1973). *Motivation in work organizations.* Monterey, CA: Brooks/Coole Publishing.

Marlow, D., Marlow, E. & Arnold, A. (1995). Career development and women managers: Does one size fit all? *Human Resource Planning,* 18(2), 38-49.

Morrison, A. & Von Glinow, M. (1990). Women and minorities in management. *American Psychologist,* 45, 32-40.

Noe, R., Hollenbeck, J., Gerhart, B. & Wright, P. (1994). *Human resource management: Gaining a competitive advantage.* Boston, MA: Irwin.

Patton, M. (1990). *Qualitative Evaluation and Research Methods.* Newbury Park: Sage.

Ragins, B.R. (1989). Barriers to mentoring: The female manager's dilemma. *Human Relations,* 42(1), 1-22.

Thomas, D.A. (1989). Mentoring and irrationality: The role of racial taboos. *Human Resource Management,* 28(2), 279-290.

Yin, R.K. (1994). *Case study research: Design and methods.* Newbury Park, CA: Sage.

U.S. Department of Labor (1993). *Facts on working women.* Washington, DC: U.S. Government Printing Office.

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Human Resource Development Professionals' Perceptions of Reasons for Downsizing and Training Strategies Developed for Middle Managers

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This ex post facto study examined human resource development (HRD) training professionals' perceptions of: (1) training strategies developed for middle managers in both downsized and non-downsized organizations; and (2) the relationship between reasons causing organizations to downsize and middle management training strategies. The study surveyed 500 randomly-selected current members of the American Society for Training and Development (ASTD). Results indicated that downsizing had little impact on training strategies participating organizations developed for their middle managers.

Downsizing is an extremely relevant issue to organizations today, in that it has become the most prevalent dilemma within corporate America in recent years (Labib & Appelbaum, 1994). Over 2.2 million Americans were laid off between January, 1990 and December, 1994 (Serwer, 1995). The composition of these unemployed workers revealed that the majority (65%) were managers, professionals, and staff. Annual surveys by the American Management Association (AMA) showed that over two thirds of their member firms downsized between 1988 and 1993, and that, although middle managers make up about 8% of the total U.S. workforce, they accounted for 20% of the reductions (Hecksher, 1995). There are numerous issues that an organization should address during the downsizing planning phase that pertain to its economic and institutional environments, cost/benefit considerations, legal obligations, human resource responsibilities, and implied ethical commitments to society. Frequently, downsized organizations disregard the importance of the work load or tasks previously assigned to the former (laid-off) middle managers. There are only three alternatives --these tasks have to be either retained, outsourced, or eliminated. Some degree of work force training is implied in each of these alternatives.

Downsizing Defined

Organizational downsizing refers to a planned or conscious set of activities undertaken by top management of an organization designed to improve organizational efficiency, productivity, and/or competitiveness (Cameron, 1994). Downsizing has four major attributes that define the concept and give the term a unique quality:

- Is a planned or conscious set of activities that implies organizational action,
- Usually involves reductions in personnel,
- Focuses on improving the efficiency of the organization, and
- Directly affects tasks or work processes (p. 193).

Problem Statement

Unfortunately, the current trend finds many organizations more concerned with downsizing and eliminating workers and eschewing the opportunity to develop their remaining employees as valuable resources (Vincour, 1994). Companies tend to reduce their work force, but do not reorganize the work. What is needed in the downsizing process is a provision for training surviving employees to

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help them adapt to the new structure. On a positive note, Sheets and Ting (1988) surveyed 407 domestic organizations and found a positive correlation between the presence of in-house training and the time frame required for surviving employees to adapt to the new organization structure.

Little is known about the success of training strategies developed for middle managers in downsized organizations. This scarcity of knowledge is particularly glaring when comparing middle managers' training strategies in organizations that have reduced the total number of middle managers with those that have not. Even less is known about relationships that may exist between the reasons an organization downsizes and training strategies developed for its middle managers.

Purpose Of The Study

The purpose of this study was to examine HRD professionals' perceptions of (1) training strategies developed for middle managers in organizations that reduced the total number of middle managers, compared and contrasted with training strategies in those organizations that did not reduce the number of middle managers; and (2) the relationship between reasons compelling an organization to reduce the number of middle managers and training strategies (task retraining, task cross-training, and developmental training) designed for middle managers. The rationale for selecting middle managers is that they are viewed as the operational core holding the business together at a practical level, whereas top managers think long-term. Unfortunately, the wave of downsizing sweeping through corporate America has generated a lesser opinion of the middle manager's worth. Heckscher (1995) studied middle managers in eight large organizations over a four-year period (1989-1993) and reported that, in general, corporate America generally regarded middle managers as the "snow tire around their waist" (p. 28). In other words, in many companies, they were considered to be excess fat that could be excised without damaging the organization. Heckscher's research revealed that the job security of middle managers was often a casualty of organizational downsizing.

For middle managers, the shift from their traditional roles of planning and control to responsibilities that demand both flexibility and speed may signal the end of an era. Kodak Corporation was a classic example of this change in management environment, as they slashed 12,000 positions, most of them in middle-management during a four-year period (1988 through 1992). As justification, Kodak's top management cited a need to remove layers of management in order to move closer to the customer.

Research Questions

This research study examined training professionals' perceptions of training strategies developed for middle managers in downsized organizations. The study was structured to address the following research questions derived from the literature review.

1. Do training strategies differ for organizations that did reduce the total number of middle managers as compared with those that did not?
2. In comparing downsized and non-downsized organizations, is there a difference in the kinds of training support programs needed to enhance the interface between training strategies and specific curricula developed for middle managers?
3. Do reasons for reducing the number of middle managers influence the training strategies developed for middle managers in a downsized organization?
4. Which middle-management training strategies are prevalent in downsized organizations?
5. Do downsized organizations develop training strategies to link the knowledge, skills, and behaviors of middle managers to the organization's efficiency and profitability goals?

Hypotheses

Hypothesis 1: Based on the perceptions of HRD professionals, there is a significant difference in middle management training strategies developed in organizations that reduced the total number of middle managers when compared with similar training strategies developed in organizations that did not reduce the number of middle managers.

Hypothesis 2: Based on perceptions of HRD professionals, there is a relationship between reasons causing an organization to reduce the total number of middle managers and training strategies developed to train surviving middle managers.

Description Of Population

The population from which the study was drawn was limited to HRD training professionals randomly selected from 500 organizations currently listed as active members of the American Society for Training and Development (ASTD). The random population of training professionals selected was further stratified to exclude ASTD members from academic institutions, consulting organizations, and off-shore (non-U.S.) locations. Training professionals who participated in this study had access to information on training strategies provided for middle managers and possessed some general knowledge of reasons driving the decision to reduce middle managers. Of the 500 organizations surveyed, 308 training professionals responded--194 from downsized organizations and 114 from non-downsized organizations.

Methodology

This study used both an ex post facto design, with hypotheses and correlational methodology. The data collected on these variables focused on middle management training strategies to determine if there is a relationship among the reasons causing the organizations to reduce middle management positions.

The independent variable is the decision to downsize. This decision has five levels. The first level is a decision not to downsize or restructure (R_0). R_0: Since January, 1990, the organization has not reduced the total number of middle managers. For the purpose of this study, there are four separate levels or reasons why an organization decided to downsize (reduce the number of middle managers).

These reasons identified by Louis Harris & Associates (1991) are defined below:

R_1: Change in business strategy/core competencies. Company decided to divest a portion of the organization/ product line and/or made a conscious decision to vacate a market segment. This decision included closing facilities/plants, centralization and/or transferring work, thereby reducing the need for middle managers.

R_2: A response to increased/stronger competition. Direct competitors gained larger market share through lower prices, aggressive marketing, and/or more advanced technology, i.e., global competition opened markets to stronger competitors that caused a downturn in business. Fewer middle managers were needed.

R_3: A direct acquisition/merger/consolidation. Company was acquired by, merged with, or consolidated into another organization. Eliminated duplicate job responsibilities.

R_4: To improve efficiency/profitability. Due to reasons, not listed above, there was a direct reduction of operational costs. The reduction in costs was achieved through a direct layoff of middle managers, i.e., a reduction in the layers of management. The primary driver was a need to increase profits with no other discernible mitigating factors (p. 3).

The dependent variable is middle management training strategies defined as curricula/programs designed to improve performance on the job. It addresses middle managers' knowledge, skills, and behavior, and generally has short range impact . The dependent variable (T_1-T_3) has three separate curricula/program levels defined as:

T_1 Task Retraining: Traditional job-skill specific training of an employee to perform unfamiliar tasks--a one-for-one change of managers. Training a middle manager to effectively perform the same job responsibilities assigned to the immediate predecessor.

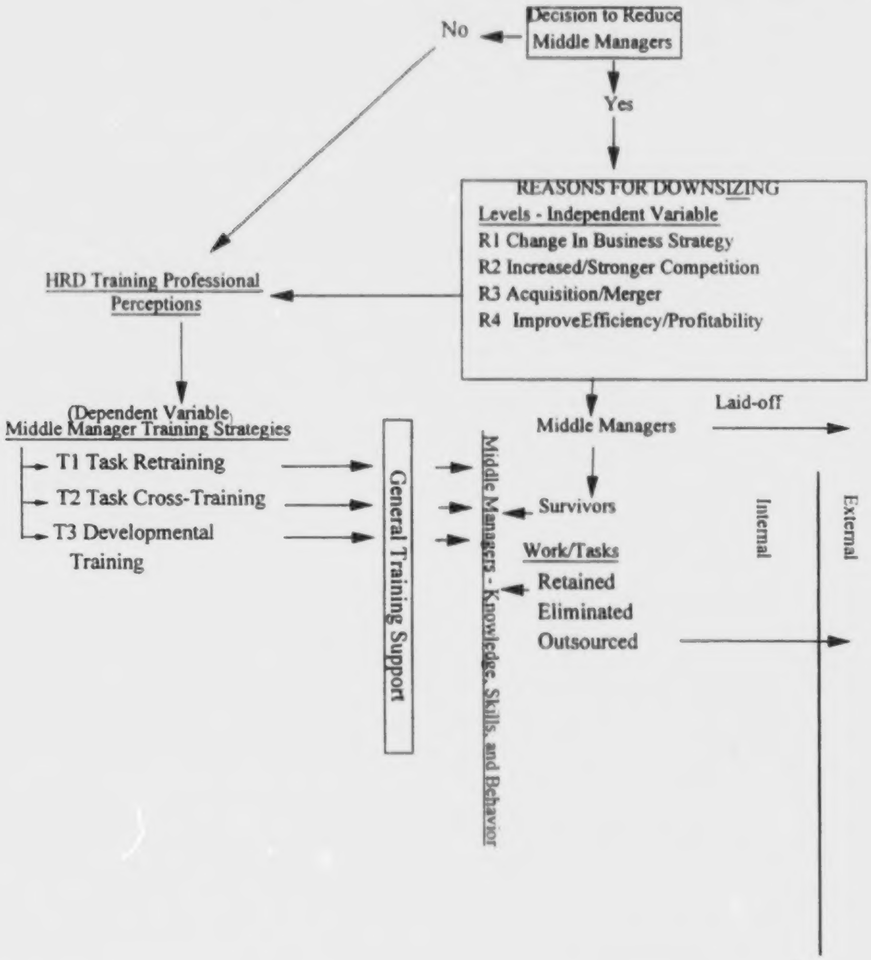
T_2 Task Cross-Training: Training to provide a general working knowledge of various functions, which implies the capability to effectively perform a broad range of tasks.

T_3 Developmental Training: Training that focuses on understanding organizational issues like core competencies, total quality management, career pathing/development, team building, and diversity needed by middle managers to effectively perform their assigned tasks.

Research Model

The model Middle-management Training Environment (see Figure 1) illustrates training interactions within an organization following an initial yes-or-no decision to reduce the total number of middle managers.

Figure 1 - Research Model Middle Management Training Environment


Decision to Reduce Middle Managers
No
Yes
REASONS FOR DOWNSIZING
Levels - Independent Variable
R1 Change In Business Strategy
R2 Increased/Stronger Competition
R3 Acquisition/Merger
R4 ImproveEfficiency/Profitability
HRD Training Professional Perceptions
(Dependent Variable)
Middle Manager Training Strategies
T1 Task Retraining
T2 Task Cross-Training
T3 Developmental Training
General Training Support
Middle Managers - Knowledge, Skills, and Behavior
Middle Managers
Laid-off
Survivors
Work/Tasks
Retained
Eliminated
Outsourced
Internal
External

If the organization decides not to reduce middle managers (independent variable), there is no need to explain details supporting this decision. Therefore, training professionals responding from organizations that have not downsized provided only their perceptions of the training strategies developed for middle managers (dependent variable). On the other hand, training professionals responding from organizations that have downsized (reduced the total number of middle managers) provided both their perceptions of the reasons for the reduction in manpower (independent variable), and training strategies developed for surviving middle managers (dependent variable). As illustrated by the model, when an organization reduces the number of middle managers, the work load or tasks assigned to laid-off middle managers will have to be either retained, eliminated, or outsourced.

Statistical Analysis

In order to test Hypothesis 1, variation within and between each group (downsized vs. non-downsized) was statistically analyzed yielding an f value. This calculation was supported by a non-directional two-tailed test for significance. This study specified a .05 level of significance that requires that 5% of the total responses include both tails. The statistical test for significance includes the mean, standard deviation, f value, and a pooled variance estimate that computes a t test--t value, degrees of freedom, and a 2-tailed probability. For each item in the instrument, a t test for independent means was used to determine if the difference between the means of two samples was significant.

Hypothesis 2 examined the relationship among training professionals' perceptions of the reasons for downsizing and training strategies developed for middle managers. This statistical examination was accomplished with a one-way (1x4) ANOVA as a measure of observed differences for each of the 25 survey items. When the f ratio was significant (less than .05 is significant), Scheffe's test for multiple comparisons was used to determine which mean(s) was significantly different from the others.

Results And Conclusions

Findings of the study indicate no difference in training strategies among organizations that *did* reduce the total number of middle managers as compared with those that did not . HRD training professionals from both downsized and non-downsized organizations reported more extensive use of developmental training (T_3) than either task retraining (T_1), or task cross training (T_2) when designing training strategies for their middle managers. A middle management developmental training (T_3) curriculum can emphasize the understanding of broader issues important to the organization, as opposed to narrow task-related training initiatives. Developmental training (T_3) allows an organization to both shape and reinforce those middle managers' knowledge, skills, and behavior needed to support the organization's mission, goals, and objectives. This study concluded that a relatively small number of the responding organizations formally cross-trained (T_2) middle managers.

Analysis of responses indicated that training professionals from downsized organizations reported less extensive middle management training initiatives than did training professionals from non-downsized organizations. Sixty-two percent of their total scores recorded in the survey were either 1-no extent or 2-very little extent on the Likert scale. By comparison, training professionals from non-downsized organizations recorded, relatively fewer of their total scores (47%) in the 1-no extent or 2-very little extent, range on the Likert scale.

There was a significant difference among responses regarding the development of a clearly defined training strategy for middle managers. HRD professionals from non-downsized organizations tended to have a clearly defined middle management training strategy in place, whereas responding HRD professionals from downsized organization indicated they had not developed extensive training strategies for their middle managers.

Based on this study, training professionals from organizations that downsized because of a merger or acquisition (R_3) tend to provide a higher level of training support for their middle managers, when compared to other downsized organizations. Organizations that downsized solely to reduce costs (R_4) tended to develop minimal training curricula for their middle managers. Based on the findings of this study, many HRD training professionals from R_2 organizations (downsized due to stronger competition) did not perceive a need to provide management training initiatives for middle managers. The study found that many HRD training professionals from those organizations that downsized due to a change in business strategy (R_1) have recognized and developed curricula to support both the "knowledge worker" and "specialists" in middle management. Most of the training professionals from downsized organizations did not develop training curricula to help middle managers cope with personal apprehensions (i.e. fear, distrust, insecurity, and anger) following a restructuring of the organization.

Contribution To New Knowledge In HRD

The study is one of the first to research perceptions of HRD professionals in downsized organizations concerning the relationship between reasons for downsizing and training strategies developed for middle managers. This information should be useful to HRD professionals in both downsized and non-downsized organizations. HRD professionals from those organizations that downsized to reduce costs should carefully consider the results of this study to guide the development of an effective training curriculum for their middle managers. The data indicated that HRD professionals with downsized organizations generally have not recognized a need to develop middle management training strategies. This support may require that training professionals partner with line management in the development and implementation of an effective middle management training strategies that directly supports the organization's mission, goals, and objectives. The implication is that HRD professionals may have to become more assertive within downsized organizations to make company executives aware of the benefits of developing the climate, culture, and competence required to facilitate the transformation of their remaining middle managers into a cohesive team.

Suggestions for Further Research

Further research should be conducted to extend the findings of this study. Specific recommendations include:

- Longitudinally assess costs/benefits of cutting or eliminating HRD training budgets in downsized organizations. That study should analyze the complex problems that result from the emergent uninformed and self-educated middle managers.
- Assess middle management training initiatives that were developed in organizations that downsized due to a merger/acquisition. Do they establish a common language, shared agendas, and congruency between organizations' business and training strategies? How is program effectiveness measured?
- Assess the need for training strategies that can help surviving middle managers cope with personal apprehensions or stress associated with restructuring.
- Assess the need for training surviving middle managers in downsized organizations. Do their training needs and expectations differ from predownsized structures? Does downsizing cause a change in training curricula for middle managers?
- Assess task retraining of middle managers employees to determine if task-focused curricula provide the training flexibility needed to respond to a restructuring of the organization.
- Determine reasons why organizations that have not reduced middle management tend to develop training strategies for their middle managers.
- Assess the need for partnerships between line management and HRD training professionals in downsized organizations. What is the best method of identifying survivor training needs in a downsized organization?

Bibliography

Cameron, K. S. (1994). Investigating organizational downsizing fundamental issues. Human Resource Management, 33(2), 186-211.

Heckscher, C. (1995). White collar blues: Management loyalties in an age of corporate restructuring. New York: Basic Books.

Labib, N., & Applebaum, S. H. (1994). The impact of downsizing practices on corporate success. Journal of Management Development, 13, 59-85.

Louis Harris & Associates. (1991). Downsizing: An evolving corporate strategy. HR Executive Review--Downsizing [pamphlet]. New York: The Conference Board.

Serwer, A. E. (1995). Layoffs tail off--but only for some. Fortune, 131, 14-15.

Sheets, R. G., & Ting, Y. (1988). Determinants of employee termination benefits in organizations. Administrative Science Quarterly, 33, 281-317.

Vincour, R. M. (1994). Employees are allies, not adversaries. American Printer, 2(12), 77-78.

Perceived Leadership Style and Individual Differences as Predictors of Subordinate Information Seeking Behavior

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An argument is developed that a perceived leadership style of a superior predicts information seeking behavior of subordinates in an organizational setting. Transformational and transactional leadership theories were utilized to postulate that the content type and frequency of information sought by a subordinate from his/her superior will vary depending on that superior's leadership style. Implications are drawn for the role of information seeking for managers' development and career advancement.

Organizational environments are frequently assessed, at least in part, on the amount of uncertainty they instill in organizational life (Daft & Lengel, 1986; Thompson, 1967). The expectation of change and change itself contribute to the level of uncertainty of each individual in the organization by increasing the difference between the amount of information required for individuals' organizational well-being and the amount of information these individuals already possess. Because information reduces feelings of uncertainty (Berger, 1979; Crawford, 1974), and because uncertainty and change are common organizational realities, individuals need information consistently. Thus, the underlying assumption is that information insufficiency yields information search activities, and it comes as no surprise that information seeking has come to the fore of researchers' and practitioners' interest in the management field.

It is almost impossible to provide but a vague definition of information seeking that would capture each of the various perspectives, assumptions, and research interests that stem from decision making, social psychology, management information systems, and organizational behavior and communication areas. Information seeking in this paper is regarded as and limited to represent an integral part of interpersonal superior-subordinate communication. An important part of what managers do is to act as a source of information to their subordinates, and a variety of information types in regard to content are important, and often crucial, to subordinates' well-being. Subordinates seek information to obtain useful insights related to their work, as well as to reduce uncertainty about their work and themselves (Ashford, 1986; Morrison, 1993a, Mullen, 1994). Following on the basic premise from the feedback seeking behavior (FSB) literature that individuals consciously devote effort toward determining the adequacy and correctness of their behaviors (Ashford & Cummings, 1983; Ashford, 1986), we assume that employees will, under certain conditions, exhibit a proactive seekers' mode. Subordinates' perceptions of who their superiors are and what are their goals and motives are likely to appear as a crucial determinant of their proactive behaviors such as information seeking. Further, information seeking patterns are likely to, in turn, influence their task performance, affect their relationship with their superior, as well as their attitudes toward the organization (Morrison, 1993a). The questions addressed in this paper concentrate on the information seeking process. More specifically, the frequency and types of information sought by the subordinate from his/her superior and the antecedents thereof are the primary foci of this investigation.

In their studies of newcomer information seeking, Morrison (1993a, 1993b) and Miller & Jablin (1991) have combined feedback seeking with other information seeking types relevant to newcomers in the process of socialization. Their extended typologies are used here to the extent that the types are relevant to a subordinate throughout his/her tenure. Similar types have been utilized beyond the socialization context (e.g., Mullen's (1994) work on mentoring relationships). The information types included here are: technical and referent information regarding questions about something in the task or environment; and social feedback and performance feedback, with the distinction between outcome and process feedback (Earley, Northcraft, Lee, & Lituchy, 1990), all regarding questions about self. Technical information seeking encompasses questions about

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how to perform certain aspects of a job/task. Among the reasons for search of technical information are: defining a problem/task; learning techniques applicable to dealing with the problem/task; finding solutions; as well as identifying a specific piece of missing data (Kaufman, 1983). Referent information type pertains to questions about role demands and expectations of a subordinate. Although particularly useful at the socialization stage, this type seems equally relevant to an employee throughout his/her tenure, in typically uncertain and rapidly changing environments. Information about self includes: performance feedback as it relates to questions about how well a subordinate is performing at work; and social feedback as it relates to questions about the acceptability of subordinate's social behavior at work. Outcome performance feedback provides only information on performance outcomes, while process performance feedback is provided to facilitate employees' performance by assisting in their search of effective task strategies (Earley et al., 1990).

Apart from a few rare exceptions, (Ang, Cummings, Straub, & Earley, 1993; Vancouver & Morrison, 1995), a superior who is also a feedback/information giver has been conceptualized as a "generic" person, reflecting a uniform behavior of his/her kind. This lack of research on the effects of a superior's style is paradoxical, especially in the light of abundance of studies in which a strong relationship between a leadership style and follower satisfaction and performance has been found (e.g., Campbell, Dunnette, Lawler, & Weick, 1970; Crowe, Bochner, & Clark, 1972). Furthermore, by identifying inference, face loss, and effort costs of feedback seeking behavior in their pivotal work, Ashford & Cummings (1983) have implicitly invited research on the superior - feedback seeking behavior interaction. Broader literature on information sources has often qualified personal sources as most important to individuals in organizations (Buzannell, 1987). Further, some research suggests that the most important among personal sources are immediate supervisors (Ashford, 1993; Goldhaber, Yates, Porter, & Lesniak, 1978). Supervisors have been found to be an employees' major link to the information environment and it has been shown that their feedback was most useful in assessing employees' current status and potential for advancement within the organization (Walsh, Ashford, & Hill, 1985). The source attributes typically discussed are source accessibility, conceived as "the ease of obtaining the information (O'Reilly, 1982), and source quality, encompassing attributes such as overall credibility and reliability (O'Reilly, 1983), honesty (Liska, 1978), sensibility (Zmud, 1978), and reward power (Vancouver & Morrison, 1995), among others. There is, however, no evidence of field research that deals with source attributes in general, and with superior attributes in particular. In fact, with the rare exception of the Ang et al. (1993) study looking at the relationship between a superior's mood and subordinates' feedback seeking behavior in a laboratory experiment, no work has been done to determine the influence of superior's attributes on subordinates' information seeking behavior, or to, at least, offer a list of this source's potential attributes that uniquely pertain to information seeking. I suggest that subordinates often experience their superiors in a more holistic way, and therefore do not, in general, perceive each of their individual attributes individually, in their regular interaction. It therefore seems plausible that a larger picture of a superior, such as his/her style of leadership, may, in large part, determine a seeker's regular information seeking pattern. Many of the source attributes mentioned above may simply be subsumed under this larger, more encompassing dimension. I propose that transformational and transactional leadership theories are helpful in search of such evidence. The following is a brief description of the basic premises of these two theories.

Building on the work of Weber (1923/1947) and House (1977), Bass (1985), in his transformational leadership theory, explores the concept of charisma as an interaction phenomenon and operationalizes it through attribution and behavior. Unlike Burns (1978) who envisioned transformational and transformational leadership as two ends of the same continuum, Bass claimed that the two are conceptually distinct phenomena, although they may be displayed by the same leader. The thrust of Bass' theory is summarized as follows.

The aim of a transformational leader is to arouse the needs of followers in accordance with the leader's own goals, the final result being performance beyond expectations. Self-reinforcement becomes a key motivator of a subordinate's behavior. Although, theoretically, they can be found at any level of any organization, transformational leaders are more likely to emerge during crises and in times of social change, as clear norms, and overly structured environments can pose an obstacle to their existence (Bass, 1985). The leader-follower relationship is regarded as one of mutual stimulation (Deluga, 1988). The style is characterized and posited to be a composite score from three dimensions: *charisma* (fundamental dimension, described in respect to how followers perceive and react toward the leader. Its subdimensions are: attributed charisma, idealized influence, and inspiration); *individual consideration* (implying that attention is being paid to the subordinate in the form of mentoring, and developmental orientation); and *intellectual stimulation* (providing the climate for the followers to question their ways, as well as those of their leader).

Transactional leadership, on the other hand, assumes exchange-based and leader-controlled relationships. The overall description of the style portrays a leader who remains quiet as long as his/her subordinates are meeting their performance standards. The style is characterized by and represents a composite score from two dimensions: *contingent reward* (rewards for the follower are based on compliance); and *management-by-exception* (resulting either in negative reinforcement or in the attitude reflected in "If it ain't broke, don't fix it". One therefore differentiates between passive and active modes of this dimension).

There exists mixed empirical evidence that transformational leadership results in better performance of subordinates than does transactional leadership (e.g., Longshore, 1988; Onnen, 1987). Conclusions of some studies were that both leadership styles had strong relationship with performance indices (e.g., Curphy, 1992). It is thus, by no means, a black and white portrayal of the two styles. Some managers may be promoted exactly because of their transactional abilities to work within the system (Bass & Avolio, 1993). The only finding that has remained consistent across research is that the absence of leadership is seen uniformly as being ineffective and dissatisfying for followers (Bass & Avolio, 1993).

Transformational and Transactional Leadership: In Search of the Effect on Subordinates' Information Seeking Patterns

Through mentoring, one-on-one contact, and intellectual stimulation, a perceived transformational leadership style lowers all three types of costs of information seeking proposed by Ashford and Cummings (1983)--inference, face loss, and effort costs. A subordinate can infer leader's motives more easily, the leader is more accessible (Kaufmann, 1983; O'Reilly, 1982; Vancouver & Morrison, 1995), and negative reinforcement is not exercised by the leader. Thus, we can expect a more involved information seeking activity on the part of a subordinate.

> *Proposition 1*: Perception of a superior's leadership style will add to the prediction of the frequency of information sought by a subordinate in that frequency will be higher if a superior is perceived as a transformational, rather than transactional leader.

Face loss costs in seeking performance feedback as well as social feedback from a perceived transactional leader seem exceptionally high, due to high probability of negative reinforcement. This will negatively influence the amount of information sought. The evidence of subordinates' reluctance to seek performance feedback in case of poor performance or perception of unmet expectations has been well established (Larson, 1989; Morrison & Cummings, 1992). On the other hand, the style seems to encourage seeking technical and referent information, as they are distanced from self. Technical information is typically task-related and does not involve feelings or judgements. Seeking referent information can be regarded as a preparation for, or a confirmation of, an exchange-based (i.e., transactional) relationship.

> *Proposition 2*: The frequency of seeking technical and referent information from a transactional leader will be higher than the frequency of seeking performance and social feedback from such a leader.

Intellectual stimulation and the insistence on the continuous development exercised by a transformational leader contribute to a subordinate's interest in the process of work, not only its outputs. I propose that this attitude contributes to the amount of process performance feedback sought.

> *Proposition 3*: The frequency of seeking process feedback, as compared to outcome performance feedback, will be higher if subordinates seek the feedback from transformational than from transactional leaders.

The Effect of Individual Difference Antecedents on the Focal Relationship

Also included in this paper's model are those individual difference constructs for which there is considerable evidence of influence on feedback/ information seeking. Following on the advice of Ajzen (1987) regarding the conceptualization of individual difference constructs, I advocate the use of their more domain-specific levels that pertain uniquely to the organizational settings.

Job Related Tolerance for Ambiguity (JRTA). JRTA (Benett, Herold, & Ashford, 1985: Norton, 1975) has been closely examined in the FSB literature. Generally, it has been found to be negatively related with feedback seeking frequency (Ashford & Cummings, 1985;Fedor,Rensvold, & Adams, 1992). JRTA seems to be particularly important in the case of perceived transactional leadership style. This is because a subordinate-leader interaction is reduced to a minimum, and as such it provides for higher levels of the ambiguity of the situation and uncertainty about outcomes among subordinates who consequently lack referent and outcome performance feedback information.

> *Proposition 4*: The higher the subordinates' JRTA, the more referent information and outcome performance feedback they will seek from a transactional leader, as compared to other information types.

Individual Goal Orientation--Work Domain (GO). Recent FSB-related research on goal orientation has been grounded in the work of Dweck and colleagues (Dweck, 1986; Dweck & Leggett, 1988) in social cognitive psychology. VandeWalle and Cummings (1997) proposed the distinction between two types of individuals and their behaviors--those with learning goals who focus on improving their ability, and those with performance goals who focus on proving their ability, all according to their implicit theories of intelligence. VandeWalle (in press) suggested 'mid-level' domain specificity and further differentiated between academic and work goal orientation. Because learning oriented individuals seek more feedback about their work, even under challenging conditions (VandeWalle & Cummings, 1997), it seems plausible that:

> *Proposition 5*: Learning oriented subordinates will seek more process performance feedback in general than will their performance oriented peers, from both transformational and transactional leaders.

Organization-based Self-Esteem (OBSE). Many FSB studies in which global self-esteem has been proposed as an antecedent have gone unsupported (e.g., Ashford, 1986). Conversely, Van Dyne, Earley, & Cummings (1990) found a positive correlation between feedback seeking frequency and a more domain specific version--class-based self-esteem. Brockner's (1988) behavioral plasticity theory also seems to suggest that there may be significant differences in the type of information individuals seek, depending on their level of self-esteem.

It has been suggested that subordinates high in self-esteem, are less influenced by the quality of their relationship with their feedback source in deciding whether or not to seek feedback (Vancouver & Morrison, 1995). On the other hand, it may be expected that subordinates with low self-esteem, needing approval and self-affirmation, as well as in search of self-diagnosticity, will take advantage of the developmental support they receive from transformational leaders, and become further intimidated and alienated by the possible negative reinforcement practices of transactional leaders. In general, it is expected that OBSE, as defined by Pierce, Gardner, Cummings, & Dunham (1989), will influence the relationship between subordinates' information seeking and a perceived leadership style such that:

> *Proposition 6*: The level of subordinates' OBSE will be inversely related to the amount of information they seek from transformational leaders, and positively related to the amount of information they seek from transactional leaders.

More specifically, and according to the behavioral plasticity theory (Brockner, 1988), subordinates with low OBSE are expected to seek information that seems less costly and does not have the potential to further deteriorate their sense of self-identity.

> *Proposition 7*: The lower the subordinates' OBSE, the more they will seek technical and referent information, rather than performance and social feedback, from both transactional and transformational leaders.

Practical Implications

Even though organizational practitioners have been acquainted with the notion of transformational and transactional leadership for almost a decade, the concepts have hardly been considered in the context of follower/subordinate information seeking. The propositions suggested in this paper should broaden this leader categorization by including a view of each leader type as an information source, rather than just an information provider. The initial task, however, is to fully develop and implement training and OD efforts to make headway in the direction based on the pivotal assumption that subordinates are proactive in their search for adequate information.

If the propositions indeed hold in empirical investigation, management training efforts should then focus on providing skills needed to link the two leadership styles and seeking a variety of information types by subordinates. Assessments preceding the design of training programs should account for consequences of not seeking certain information types in regard to the task at hand or to some salient organizational objectives, and then relate those to the existing leadership style of participants. The MLQ instrument (a shorter 1996 version, in particular) can be used for initial leader assessment. The subsequent training should ensure basic awareness of the major individual characteristics of subordinates that play a role in their seeking choices. The training efforts should also emphasize the importance of outcome and process feedback seeking differentiation, and relate it to the importance of the leadership style and goal orientation influences. Similar training should also be provided to subordinates with the general purpose of enriching their "bag of tools" when it comes to seeking information from their superior.

To enhance the organizational information environment, OD efforts should focus on the systematic investigation of the information that employees really need, the assessment of the strategies they have used to get each information type in the past, as well as what has gone wrong in the search process. Such assessment should encompass a closer look at monitoring (Ashford & Cummings, 1983), as well as other available information sources not considered in this study. Only after having such a more comprehensive assessment of the situation, can we attribute any information problem or issue to a leadership style. Otherwise, leadership training may not be the logical next step. Rather, focusing on the design and implementation of other structural interventions may be more fruitful.

Limitations and Future Research

This model is concerned only with direct inquiry methods of information seeking. Other authors have rightly noticed a variety of other modes such as monitoring (Ashford & Cummings, 1983), going through a third party (Miller & Jablin, 1991), and the like. It has been shown in the FSB literature that inquiry, as compared to monitoring, is a more costly strategy because it exposes the individual's need for feedback and this need may be seen as a sign of uncertainty or insecurity (Ashford & Northcraft, 1992). Our decision to limit the observation to inquiry may pose a limitation to realistically assessing feedback seeking patterns.

It should also be noted that employees are very likely to seek information from sources other than their superiors. These other sources such as co-workers; task itself; and the organization, may have varying importance to employees in regard to different types of information. It is unwise to assume that the findings on the importance of a supervisor as a feedback source hold equally for technical and referent information. Thus, any bias produced by the choice of a specific source is likely to be unequally distributed among the information types included in the study.

The questions raised here did not include assessment of the quality of acquired information. O'Reilly's (1982) attributes such as: timeliness, relevance, and specificity may be considered in future research. More generally, I did not examine the benefits of information seeking as they related to a specific leadership style. Inclusions of outcome measures such as job satisfaction, promotion, or increased recognition, would probably lead to consideration of other intervening variables, and some of the relationships shown in this model as main effects, may be seen in the context of moderation or mediation in this larger picture.

Empirical investigation of the model should be designed to utilize field setting and survey methodology. This is to maximize the exploitation of a natural environment, as well as real-time, longitudinal data collection. The following theory-driven requirements should be considered. First, all participating employees (subordinates) should belong to the same organization and perform similar tasks, to avoid data contamination and problems of morphogenesis. Second, newcomers to the organization should be excluded from the study because the socialization literature has clearly pointed to differences in the information seeking patterns between newcomers and already socialized employees. Finally, the choice of an organization should concur with the theoretical assumptions about the emergence of transformational leadership, thus searching for conditions of dynamism, crisis, change, and/or general uncertainty.

The data should be collected in two phases. In phase One, the subordinate questionnaire including the items related to the independent variables in the study would be administered and collected. Bass and Avolio (1991) 5X-rater version of the Multifactor Leadership Questionnaire (MLQ) is recommended for the Leadership style variable. In phase Two, at the end of each working day, subordinates would record in a behavioral checklist the type and frequency of information they sought from their superior on that day. This phase would be at least one month in duration to allow for an information seeking pattern to emerge, as well as to provide for real-time data collection. This design would also prevent the differential period problem, which occurs when past behaviors are predicted on the basis of current attitudes and perceptions.

Conclusion

Overall, I suggest that, within the boundaries described herein, superior's leadership style may have a unique effect on each of the five information types sought by subordinates. Although preliminary in scope, the proposed model provides clear directions for further efforts in investigating this interesting and salient antecedent. It also reveals the importance of the information seeking typology, as a tool for understanding the complex content-based differences within what may be considered an overly broad construct.

References

Ajzen, I. (1987). Attitudes, traits, and actions: Dispositional prediction of behavior in personality and social psychology. In L. Berkowitz (Ed.), Advances in experimental social psychology, 20, pp. 1-63. New York: Academic Press.

Ang, S., Cummings, L. L., Straub, D. W., & Earley, C. P. (1993). The effects of information technology and the perceived mood of the feedback giver on feedback seeking. Information Systems Research, 4(3), 240-261.

Ashford, S. J. (1986). Feedback-seeking in individual adaptation: A resource perspective. Academy of Management Journal, 29(3), 465-487.

Ashford, S. J. (1993). The feedback environment: An exploratory study of cue use. Journal of Organizational Behavior, 14, 201-224.

Ashford, S. J., & Cummings, L. L. (1983). Feedback as an individual resource: Personal strategies of creating information. Organizational Behavior and Human Performance, 43, 370-398.

Ashford, S. J., & Cummings, L. L. (1985). Proactive feedback seeking: The instrumental use of the information environment. Journal of Occupational Psychology, 58, 67-79.

Ashford, S. J., & Northcraft, G. B. (1992). Conveying more (or less) than we realize: The role of impression-management in feedback seeking. Organizational Behavior and Human Decision Processes, 53, 310-334.

Bass, B. M. (1985). Leadership and performance beyond expectations. New York: Free Press.

Bass, B. M., & Avolio, B. J. (1991). Multifactor leadership questionnaire (form 5X-rater). Paolo Alto, CA: Consulting Psychologist Press.

Benett, N., Herold, D. M., & Ashford, S. J. (1990). The effects of tolerance for ambiguity on feedback-seeking behavior. Journal of Occupational Psychology, 63, 343-348.

Berger, C. R. (1979). Beyond initial understanding: Uncertainty, understanding and the development of interpersonal relationships. In H. Giles & R. N. St.Clair (Eds.), Language and social psychology, pp. 122-144. Oxford: Basil Blackwell.

Brockner, J. (1988). Self-esteem at work: Research, theory, and practice. Lexington, MA: Lexington Books.

Burns, J. M. (1978). Leadership. New York: Harper & Row.

Buzzanell, P. M. (1987). An information acquisition and use approach to perceived career uncertainty, transitional events and career tracks. Unpublished doctoral dissertation, Purdue University, West Lafayette, IN.

Campbell, J. P., Dunnette, M. D., Lawler, E. E., & Weick, K. E. (1970). Managerial behavior, performance, and effectiveness. New York: McGraw-Hill.

Crawford, J. L. (1974). Task uncertainty, decision importance, and group reinforcement as determinants of communication process in groups. Journal of Personality and Social Psychology, 29, 619-627.

Crowe, B. J., Bochner, S., & Clark, A. W. (1972). The effects of subordinates' behavior on managerial style. Human Relations, 25, 215-237.

Curphy, G. J. (1992). An empirical investigation of the effects of transformational and transactional leadership on organizational climate, attrition, and performance. In K. E. W. Clark, M. B. Clark, and D. R. Campbell (Eds.), Impact of leadership, pp. 177-187. Greensboro, NC: Center for Creative Leadership.

Daft, R. L., & Lengel, R. H. (1984). Information richness: A new approach to managerial behavior and organization design. In B. Staw & L. L. Cummings (Eds.), Research in organizational behavior, Vol. 6, pp. 191-233. Greenwich, CT: JAI Press.

Deluga, R. J. (1988). Relationships of transformational and transactional leadership with employee influencing strategies. Group & Organization Studies, 13(4), 456-465.

Dweck, C. S. (1986). Motivational processes affecting learning. American psychologist, 41(10), 1040-1048.

Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. Psychological Review, 95(2), 256-273.

Earley, C. P., Northcraft, G. B., Lee, C., & Lituchy, T. R. (1990). Impact of process and outcome feedback on the relation of goal setting to task performance. Academy of Management Journal, 33(1), 87-105.

Fedor, D. B., Rensvold, R. B., & Adams, S. M. (1992). An investigation of factors expected to affect feedback seeking: A longitudinal field study. Personnel Psychology, 45, 343-348.

Goldhaber, G. M., Yates, M. P., Porter, D. T., & Lesniak, R. (1978). Organizational communication: 1978. Human Communication Research, 5, 76-96.

House, R. J. (1977). A 1976 theory of charismatic leadership. In J. G. Hunt & L.L. Larson (Eds.), Leadership: the cutting edge, pp. 189-207. Carbondale, IL: Southern Illinois University Press.

Kaufman, H. G. (1983). Factors related to use of technical information in engineering problem solving. New York: Polytechnic Institute of New York.

Larson, J. R. Jr. (1989). The dynamic interplay between employees' feedback seeking strategies and supervisors' delivery of performance feedback. Academy of Management Journal, 14(3), 408-422.

Liska, J. (1978). Situational and topical variations in credibility criteria. Communication Monographs, 45, 85-92.

Longshore, J. M. (1988). The associative relationship between transformational leadership and transactional leadership styles and group productivity. Unpublished doctoral dissertation. Nova University, Fort Lauderdale, Fl.

Lowin, A., & Craig, J. R. (1968). The influence of level of performance on managerial style: An experimental object-lesson in the ambiguity of correlational data. Organizational Behavior and Human Performance, 3, 440-458.

Miller, V. D., & Jablin, F. M. (1991). Information seeking during organizational entry: Influences, tactics, and a model of a process. Academy of Management Review, 16(1), 92-120.

Morrison, E. W. (1993a). Newcomer information seeking: Exploring types, modes, sources, and outcomes. Academy of Management Journal, 36(3), 557-589.

Morrison, E. W. (1993b). Longitudinal study of the effects of information seeking on newcomer socialization. Journal of Applied Psychology, 78(2), 173-183.

Morrison, E. W., & Cummings, L. L. (1982). The impact of feedback diagnosticity and performance expectations on feedback seeking behavior. Human Performance, 5(4), 251-264.

Mullen, E. C. (1994). Mentorship revisited: Viewing the protégé as a source of information for the mentor. Unpublished doctoral dissertation. University of Minnesota, Minneapolis.

Norton, R. (1975). Measurement of ambiguity tolerance. Journal of Personality Assessment, 39(6), 607-619.

Onnen, M. K. (1987). The relationship of clergy and leadership characteristics to growing and declining churches. Unpublished doctoral dissertation. University of Louisville, Louisville.

O'Reilly, C. A. III. (1982). Variations in decision makers' use of information sources: The impact of quality and accessibility of information. Academy of Management Journal, 25, 756-771.

O'Reilly, C.A. III. (1983). The use of information in organizational decision making: A model and some propositions. In L. L. Cummings & B. Staw (Eds.), Research in organizational behavior, Vol. 5, 103-139. Greenwich, CT: JAI Press.

Pierce, J. D., Gardner, L., Cummings, L. L., & Dunham, R. (1989). Organization-based self-esteem: Construct definition, measurement, and validation. Academy of Management Journal, 32(3), 622-648.

Thompson, J. D. (1967). Organizations in action. New York: McGraw-Hill.

Van Dyne, L., Earley, P. C., Cummings, L. L. (1990). Feedback seeking behavior as a function of self-esteem and self-efficacy. Paper presented at the annual meeting of the Society of Industrial and Organizational Psychology, Miami Beach.

Vancouver, J. B., & Morrison, E. W. (1995). Feedback inquiry: The effect of source attributes and individual differences. Organizational Behavior and Human Decision Processes, 62(3), 276-285.

VandeWalle, D. & Cummings, L. L. (1997). A test of the influence of goal orientation on the feedback-seeking process. Journal of Applied Psychology, 82(3), 390-400.

VandeWalle, D. (in press). Development and validation of a work domain goal orientation instrument, Educational and Psychological Measurement

Walsh. J. P., Ashford, S. J., & Hill, T. E. (1985). Feedback obstruction: The influence of the information environment on employee turnover intentions. Human Relations, 38(1), 23-46.

Weber, M. (1923/1947). The theory of social and economic organization. A.M. Henderson & T. Parsons (Eds. and trans.). New York: Free Press.

Zmud, R. W. (1978). An empirical investigation of the dimensionality of the concept of information. Decision Sciences, 9, 187-195.

The Discipline of Human Resource Development

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The purpose of this manuscript is to frame the discipline of human resource development by identifying its context and component theories.

The bias of HRD has been the belief that organization performance is mediated through human expertise and human effort. In contrast to this belief the performance scorecards available to organizational decision makers generally ignore these elements. The most evident example is the short-term view of economic of company performance as judged by daily stock market data.

The journey of understanding performance for those who share the "human lens" has not been easy. The range of performance perspectives forces the HRD profession to face the realities of how others strategically view us and how we view ourselves (Torraco & Swanson, 1995; Swanson, 1995). It seems as though HRD has taken a detour during the past fifty years. The massive "Training Within Industry" (TWI) project that culminated with the ending of W.W.II is seen as the origin of contemporary performance improvement through HRD (Dooley, 1945; Ruona & Swanson, 1998; Swanson & Torraco, 1994). The performance language was simpler then-- "is it a production problem?" they would ask. If yes, they would ply performance improvement tools that were masquerading under the name of "training." Besides operating under a training title that they quickly outgrew, the Training Within Industry (TWI) project delivered on organization, process, and individual performance outputs using simple and powerful tools the called: job instruction, job relations, and job methods.

The harsh reality is that most decision makers in organizations pursue performance with or without professional HRD interventions. This simple fact confronts the HRD profession with the need to think about performance with or without the human lens. The willingness to *temporarily* let go of the human lens in favor of a performance lens is the key to elevating HRD to its fullest potential. Without this fundamental mental shift, HRD will awkwardly keep trying to get to system performance (organization) through sub-system performance (individual). I personally have enough confidence that best HRD theory and practice will invariably validate the contribution of human expertise and the unleashing of it as integral to HRD.

The simple decision to begin with the host system as the primary avenue to performance alters the models, thinking, and tools of a HRD effort. Without this shift beyond the individual, the performance lens remains clouded, the underlying theory remains unclear and/or unstated, and the research questions are automatically limited.

Real Performance is Output To perform is "to fulfill an obligation or requirement; accomplish something as promised or expected." (*The American Heritage College Dictionary*, 1993, p. 1015). Performance is not system design, capability, motivation, competence, or expertise. These, or other similar performance taxonomies, can be best thought of as *performance variables*, but not performance. Performance may be identified within missions, goals and strategies-- but, not always. *Performance is the valued productive output of a system in the form of goods or services*. The actual fulfillment of the goods and/or services requirement is thought of in terms of *units of performance*. These goods and/or services units of performance are typically measured in terms of production quantity, time, and quality features.

Chasing after individual or organization change without first specifying a valid unit of performance is inane. This is because change can take place while "real" performance decreases. One example is to pursue employee satisfaction with the assumption that production will increase. There are numerous studies demonstrating that employee satisfaction can increase while actual production decreases or remains the same. The recent reengineering fad is another vivid example of the pursuit of change with the majority of instances ending up in losses in performance, not the promised gains from the mere act of a particular type of promising change (Micklethwait & Wooldridge, 1996). There are those in the profession speaking directly to the topic of performance in an attempt to clarify the relationships among performance drivers (Holton, in-press; 1998) and/or performance variables (Swanson, 1994, 1996).

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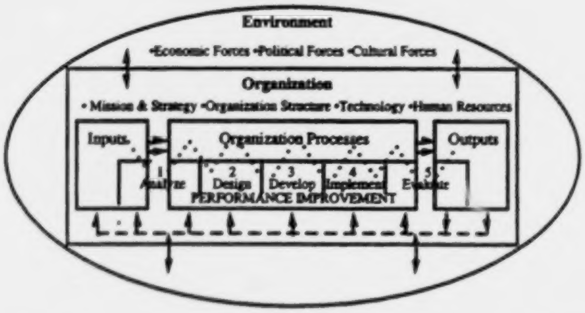
Systems theory informs us that (1) there are systems and sub-systems, and (2) that all systems are open systems. The realization that there are tiers of sub-systems, larger host systems, and that systems are open entities that are constantly changing is humbling. These realizations help professionals from thinking and acting simply and mechanically. A mental picture of the constantly evolving state of being should be held in the minds of HRD practitioners and scholars.

The larger frame in which HRD functions includes organizations and the milieu in which they function. Organizations are the host systems for most HRD activity. Some of these systems are profit-making organizations that produce goods and/or services for consumers. Some are non-profit organizations that produce goods and/or services for consumers. Some are publicly owned, some are shareholder owned and publicly traded, and some are owned by individuals or a group of individuals. All these organizations function in a political, cultural, and economic milieu that is ever-present. Each has its own mission/strategy, structure, technology, and human resource mix. And, each has core processes related to producing the goods and services it produces.

The expectation is that HRD efforts will logically culminate with important positive gains in performance for its host organization. Additionally, HRD itself can be viewed and pursued as a performance improvement process functioning within the host organization. All of this is graphically portrayed in Figure 1 as a Systems Model of Performance Improvement, a process working with other core processes within the organization that is functioning in the larger organizational context. For HRD, the final phase is focused on the assessment of performance results so as to heighten the intent of the performance improvement process.

Figure 1
Systems Model of Performance Improvement:
(HRD is a subsystem of performance improvement)


Environment
•Economic Forces •Political Forces •Cultural Forces
Organization
• Mission & Strategy •Organization Structure •Technology •Human Resources
Inputs
Organization Processes
Outputs
1
Analyze
2
Design
3
Develop
4
Implement
5
Evaluate
PERFORMANCE IMPROVEMENT

Performance improvement phases (analyze, design, develop, implement, & evaluate) within the organization.
Richard A. Swanson (1996). ANALYSIS FOR IMPROVING PERFORMANCE. San Francisco: Berrett-Koehler. Page 23

While performance will likely always demand multiple interpretations, performance, and more importantly, performance improvement, are not simply abstract notions about desirable ways to reach a better state. In every workplace the concrete determinants of performance are reflected in people, their ideas, and the material resources through which their ideas reach the marketplace. Performance cannot be described or improved without specifying its determinants, accounting for the sophisticated processes through which performance is expressed (e.g., human behavior, work process innovation, stock market performance), and making some judgment about whether or not performance has, in fact, improved. Performance improvement can only be manifest through outputs, and change in outputs can only be assessed through some form of measurement. Thus, performance is a concept that can be systematically operationalized in any organization when we set out to demonstrated whether or not it has improved.

Theoretical and Disciplinary Foundations

HRD is broader than any single set of disciplinary practices. Reflecting the reality that most successful strategies for system and sub-system improvement require multi-disciplinary interventions, the theory of improvement derives from multiple theories. This section develops a broad theoretical foundation for HRD drawing on contributions from several respected theoretical domains.

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"A theory simply explains what a phenomenon is and how it works (Torraco, 1997, p. 115), while "a discipline is a body of knowledge with its own organizing concepts, codified knowledge, epistemological approach, undergirding theories, particular methodologies, and technical jargon" (Passmore, 1997 p. 201). The idea that HRD is a discipline that draws upon many theories is widely held. This overly generous idea has served as fools' gold to the profession. In the attempt to be inclusive of so many theories-- staking its claim so broadly-- it has come up with no theory.

Theory versus Model Models to improve performance have been developed and disseminated through books, seminars, and consulting projects. Several of these models are based on extensive practical experience with improving performance (Nadler, Gerstein, & Shaw, 1992; Rummler & Brache, 1995; Schwartz, 1991; Swanson, 1994; Weisbord, 1987). Other models for improving performance have been embraced as ways to solve performance problems by addressing them as multi-dimensional problems that demand multi-dimensional solutions and some available models for performance improvement are little more than diagrams based on the author's most recent consulting experience.

Armed with a flowchart and a description of its components, HRD professionals using these models march into the workplace to affect change and find that while they may be powerful enough to effect change, they are most likely too superficial to *explain* the complex dynamics of organizational performance. In short, a model derived from logic is no substitute for sound theory. Such models can guide improvement efforts through hypothesized relationships without having those relationships ever tested. You can have a model and no theory, you can have a theory with no model, and you can have a theory accompanied by a supporting model. A model is not theory.

Disciplinary Theory for HRD Presently there is no universal view or agreement on the theory or multiple theories that support HRD as a discipline. Furthermore, there are no theory alternatives being visibly proposed in the literature and being debated by the profession. On one hand some have called for systems theory to serve as a unifying theory for HRD to access all useful theories as required (Gradous, 1989; Jacobs, 1989) and on the other hand many have proposed sets of principles in the forms of comparative lists of added value, products, processes, and expertise.

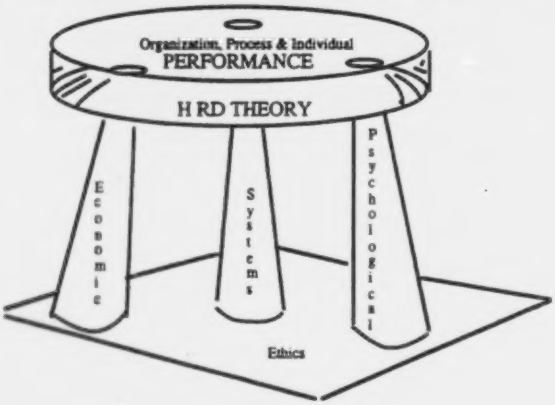
The alternative to having a sound theoretical and disciplinary base for the HRD profession is the present state of rudderless random activity aggressively sponsored by atheoretical professional associations and greedy consultants (Micklethwait & Wooldridge, 1996; Swanson, 1997). This present state celebrates short-term results without having deep understanding or the ability to replicate results.

For this reason, a discrete and logical set of theories as the foundation of HRD is proposed. It is comprised of psychological theory, economic theory, and systems theory (Passmore, 1997; Swanson, 1995). Economic theory is recognized as a primary driver and survival metric of organizations, systems theory recognizes purpose, pieces, and relationships that can maximize or strangle systems and sub-systems, and psychological theory acknowledges human beings as brokers of productivity along with their cultural and behavioral nuances. It is believed that these three theories-- more than any others-- make up the discipline of HRD, respond to the realities of the HRD profession, and that each is unique, complimentary, and robust.

The theories have been visually presented as comprising a three-legged stool, with the three legs providing great stability for HRD as a discipline and field of practice that functions in the midst of uneven and changing conditions (see Figure 2). In recent years, particularly with the advance of the global economy and an unbridled free-market condition, the stool has been positioned on an ethical rug-- a filter, if you will-- between its three theories and the context in which HRD functions. Thus, the three theories are at the core of the HRD discipline, and ethics plays an important moderating role.

Economic Theory Foundation The minimization of economic theory in HRD is untenable. For example, the widely used book on organization development, *Organization Development and Change, 5th Edition* (Cummings & Worley, 1993) does not even have the words, "economic," "financial," or "cost-benefit analysis" in the index. The organization development literature addresses the psychological theory leg of the theory stool and a portion of the systems theory leg and regularly ignores the economic leg. As a result, what is called organization development is reduced to individual development or team development in hopes of achieving improvement in organizational performance. While there is still much is to be learned, a substantial amount of information about the economics of short-term interventions (Swanson & Gradous, 1988) and broader-based investments (Lyau & Pucel, 1995) is available.

Figure 2. The Theoretical Foundations of Human Resource Development



How could responsible HRD not include direct analysis, action, and measurement of economic outcomes? Over time, organizations must generate more income than they spend in order to exist. Unless expenditures on HRD contribute to the viability and profitability of an organization, those expenditures will almost certainly be reduced or eliminated. Three specific economic theory perspectives are believed to be most appropriate to the discipline of HRD: (1) Scarce Resource Theory, (2) Sustainable Resource Theory, and (3) Human Capital Theory.

Scarce Resource Theory. Scarce resource theory informs us that there are limitations to everything. The limitations in money, raw materials, time, etc., require us to make choices as to how capital will be utilized in order to gain the greatest return. Decision makers choose among options based on their forecasted return-on-investment. This is a simple and powerful notion that forces decision makers to separate the most valuable initiatives from the many things that they would like to do if there were no resource limitations (Swanson & Gradous, 1986).

Sustainable Resource Theory. Sustainable resource theory is much like scarce resource theory except for one major point: The concern for the long-term versus short term agenda. Thurow (1993) informs us that "in the future, sustainable advantage will depend on new process technologies and less on new product technology. New industries of the future depend... on brain power. Man-made competitive advantages replaces the comparative advantage of Mother Nature (natural-resources endowment) or history (capital endowments)." (p.16).

Human Capital Theory. Becker's classic book, *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education, 3rd Edition* (1993), illustrates this domain. Becker implores the reader, "I am going to talk about a different kind of capital. Schooling, a computer training course, expenditures on medical care, and lectures on the virtues of punctuality and honesty are capital too, in the true sense that they improve health, raise earnings, or add to a person's appreciation of literature over lifetime. Consequently, it is fully in keeping with the capital concept as traditionally defined to say that expenditures on education, training, and medical care, etc., are investments in capital." (Becker, p 15-16). These are not simply costs, but investments with valuable returns that can be calculated.

Conclusion. Economist Alfred Marshall argues that, "the most valuable of all capital is that invested in human beings."(1949). Since HRD takes place in organizations that are economic entities, HRD must call upon economic theory at its core. In addition, management theories and methods should be properly viewed as useful derivatives of economic theory (See Drucker, 1964).

Psychological Theory Foundation The psychological theory which HRD can draw upon is immense. It includes theories of learning, human motivation, information processing, group dynamics, and psychology-based theories of how we make decisions and behave in organizations. Yet it has been poorly interpreted by the profession. Most practitioners grab onto a small and relatively irrelevant slice of psychological theory and act upon it in exaggerated ways. Examples include fascination with whole-brain theory and personality types. Passmore (1997) informs us that, "psychology is the science of behavior and mental processes of humans and other animals. Beyond that, we have something that resembles a teenager's closet." (p. 210).

While psychological theory may have something for everybody, HRD has yet to fully capitalize on its leverage to improve performance. At best, the HRD literature addresses the psychological theory leg of the theory stool in an unpredictable manner. Interestingly, the widely used book on training, *Training in Organizations: Needs Assessment, Development and Evaluation, 2nd Edition* (Goldstein, 1986), is almost exclusively focused on the behaviorist school of psychology and does not deal in any meaningful way with Gestalt psychology or cognitive psychology (purposive-behaviorism). Add to this the fact that HRD interventions are rarely systematically connected to the economic agenda via a systematic analysis of the organization and its goals (Swanson, 1996), and it is no wonder that HRD interventions based only on psychological theory are often dismissed as irrelevant by organization leaders.

Fascination appears be the watchword of the psychological leg as questions from psychology are typically narrow and/or disconnected from the core purpose of the organization, the work process, and often even the individual. For example, the continued fascination of such topics as transfer-of-training from the psychology perspective mostly focus on the individual and individual perceptions. The response to this state for HRD appears to be best derived through the addition of systems and economic theory, not psychological theory alone (Holton, 1996).

How could responsible HRD not integrate and use the vast body of knowledge from psychological theory? With such vast and divergent psychological theory available, it is more appropriate to focus on core understandings related to behavior and learning rather than fringe psychology theories and techniques. Three specific psychological theory perspectives are proposed here to be most appropriate to the discipline of HRD: (1) Gestalt psychology, (2) behavioral psychology, and (3) cognitive psychology (purposive-behaviorism).

Gestalt Psychology. Gestalt is the German term for configuration or organization. Gestalt psychologists inform us that we do not see isolated stimuli, but stimuli gathered together in meaningful configurations. We see people, chairs, cars, trees, and flowers-- not lines and patches of color. Gestaltists believe that people add something to experience that is not contained in the sensory data, and that we experience the world in meaningful wholes (Hergenhahn & Olson, 1993) Thus, learning involves moving from one whole to another. Words associated with gestalt psychology include introspection, meaning, closure, insight, life space, field theory, humanism, phenomenology, and relational theory. The holistic view of individuals and their own need for holistic understanding is in sharp contrast to a mechanistic and elemental view of human beings.

Behavioral Psychology. Behavioral psychology is concerned with what can be seen, and therefore behavior is what is studied. Behavioral psychologists inform us that individuals respond the only way they can given their capacity, experience, and present forces working on them. No more introspection, no more talk of instinctive behavior, and no more attempts to study the vague notions of human conscious or unconscious mind. Words associated with behaviorism include: readiness, law effect, exercise, recency, frequency, stimulus, response, reinforcement, punishment, programmed learning, and drives.

Cognitive Psychology. Tolman's term of purposive behaviorism has been selected as the exemplar of this third important perspective from psychology. Purposive-behaviorism attempts to explain goal-directed behavior and the idea that human beings organize their lives around purposes. Purposive-behaviorism and other cognitive psychology's attempt to integrate theory from gestalt and behavioral psychology.

"For Purposive Behaviorism, behavior, as we have seen, is purposeful, cognitive, and molar, i.e., 'Gestalted.' Purposive Behaviorism is molar, not a molecular...." (Tolman, 1932, p. 419). Words associated with cognitive psychology, including purposive-behaviorism, include: drive discriminations, field-cognition modes, cognitive map, learning by analogy, learned helplessness, structuring, information processing, short term and long term memory, and artificial intelligence.

Conclusion. Since HRD takes place in organizations that are psychologically framed by those who invented them, operate in them, and renew them, HRD must call upon psychology as being core (see Argyris, 1993; Bereiter & Scardamalia, 1993; Dubin, 1976). In addition, learning theories such as constructivism and situated cognition should be properly viewed as useful derivatives of psychological theory. Performance cannot be improved if people choose not to perform, put forth little effort, or do not persist in their efforts (Bereiter & Scardamalia, 1993). Moreover, systematically designed learning experiences and workplace systems provide a durable foundation for performance improvement. Thus, theories of learning, human motivation, information processing, and other psychologically-based theories provide a core theoretical foundation for the discipline of HRD.

Systems Theory Foundation Systems theory, a relatively small body of knowledge compared to economics and psychology, contains a harvest of low-hanging fruit for HRD. From a systems theory perspective, there is a wide range of systemic disconnects adversely affecting performance. Two include not being able to clearly specify the required outcomes of the host organization and not having a systematically defined HRD process (see Rummler & Brache, 1995).

Systems theory is a relatively young discipline made up of "a collection of general concepts, principles, tools, problems and methods associated with systems of any kind." (Passmore, 1997, 206-7). Jacobs's (1989) manuscript, "Systems Theory Applied to Human Resource Development," called for the profession to adopt systems theory as the unifying theory. McLagan's (1989) thoughtful reaction, "Systems Model 2000: Matching Systems Theory to Future HRD Issues," fully supported Jacobs's thesis of the importance of systems theory for HRD, but challenged him and the profession to think about and work within a more expansive and tiered world of systems.

Three specific systems theory perspectives are proposed here to be appropriate to HRD: (1) general systems theory, (2) chaos theory, and (3) futures theory.

General Systems Theory: At the core, General Systems Theory (GST) forces us to talk intelligently about inputs, processes, outputs and feedback. Furthermore, GST informs us of the reality of open systems (vs. closed systems), that systems engineering focuses on the less dynamic aspects of the organization, and the limitations of a single personality theory in predicting human behavior (Bertalanffy, 1962).

Boulding's (1956) classic article on general systems theory informs us of the paradox of a theory so general as to mean nothing and the seeming inability of a single theory from a single field of study to ever reach a satisfactory level of theory generality. He goes on to talk about the power of a "spectrum of theories," a "system of systems" which would perform the function of a "gestalt" in theory building (Boulding, 1965). "General Systems Theory may at times be an embarrassment in pointing out how far we still have to go." (Boulding, 1965, p. 10)

Chaos Theory: "Where chaos begins, classical science stops.......chaos is a science of process rather than a state, of becoming rather than of being (Gleick, 1987, p. 3- 5)." Chaos theory confronts Newtonian logic head-on by offering a revised motto away from determinism to something much softer: "Given an approximate knowledge of a system's initial conditions and an understanding of natural law, one can calculate the approximate behavior of the system." (Gleick, 1987, p. 15). Chaos theory purposefully acknowledges and studies phenomena that are unsystematic-- that do not appear to follow the rules.

Futures Theory: Futures theory is "... not necessarily interested in predicting the future, it is about the liberation of people's insights." (Schwartz, 1991, p. 9). Thus, futures theory, in context of planning for the future in uncertain conditions, in no way resembles the reductionist view of most strategic planning efforts that end up with a single strategy. The language and tools of *alternative futures* and *scenario building* are intended to create a true picture of the facts, the potential flux in those facts, and the decision-making agility required of the future. Futures theory is critical for sustainable performance in that it prepares one to recognize and cope with an evolving future state.

Conclusion. Since HRD takes place in organizations that are themselves systems and subsystems functioning within an environmental system that is ever-changing, systems theory is at its core (see Buckley, 1968; Gradous, 1989). In addition, engineering/technology theories and methods should be properly viewed as useful derivatives of systems theory (see FitzGerald & FitzGerald, 1973; Davenport, 1993) even though they have a longer scholarly history.

Ethics As noted earlier, ethics is viewed as the critical supporting theory for HRD. It serves as the filter between the three core theories of economic, psychology, and systems and the context within which performance improvement efforts take place.

The ethics angst within the profession, under the name of integrity, was the theme of the 1996 Academy of Human Resource Development Conference (Holton, 1996). Two primary integrity perspectives are proposed: integrity in ethical *beliefs* and integrity in using the high quality *processes* (Jacobs, 1996).

From the ethical beliefs perspective, some argue about the exploitive nature of organizations and would criticize HRD as an unthinking arm of management (Korten, 1995) challenging the profession to act as the agent of democracy and equity (Dirkx, 1996). Others argue that exploitation is a much more expansive concept (e.g. employees can exploit their employers), and that it must be dealt with as such (Swanson, Horton, & Kelly, 1986). It is the distribution of the spoils of performance and the relative costs paid to obtain performance that is the bogeyman of most performance discussions, and one that should be purposefully dealt with.

Maintaining the present substandard conditions is lucrative for profit providers of conferences and trade publications, publishers of books and media, circuit speaker "celebrities" and fad consultants. These elements will be a likely force of resistance to core ethical questions.

Conclusion

The purpose of this manuscript is to frame the discipline of human resourse development by identifying its component theories.

Research in the realm of theory requires that theories be developed through rigorous theory building research methods (Dubin, 1969; Hearn, 1953; Torraco, 1997), or that espoused theories be evaluated against criteria for sound theory (Patterson, 1983). HRD is presently replete with atheoretical models (not theories) and thin espoused theories.

If theory just happened as a result of practice, the development of human resources theory bucket would be overflowing. Instead, our massive field of practice is experiencing a "theory application deficit disorder." (Swanson, 1997). Fulfilling HRD's performance improvement mission through gathering and/or building the HRD discipline around the proposed theories is fundamental to the maturation of the profession.

References

Argyris, C. (1993). *Knowledge for action.* San Francisco: Jossey-Bass.

Becker, G. S. (1993). *Human capital: A theoretical and empirical analysis with special reference to education- 3rd edition.* Chicago: University of Chicago Press.

Bereiter, C. & Scardamalia, M. (1993*). Surpassing ourselves: An inquiry into the nature and implications of expertise.* Chicago: Open Court.

Bertalanffy, L. von (1962). General system theory- A Critical review. *General Systems. Yearbook of the Society for General Systems Research,* 7: 1-20.

Boulding, K. E. (1956). General systems theory-- the skeleton of science, *Management Science, 2,* 197-208

Buckley, W. (Ed.) (1968). *Modern systems research for the behavioral scientist.* Aldine: Chicago.

Cummings, T. G. & Worley, C. G. (1993*). Organizational development and change, 5th edition.* St. Paul: West.

Davenport, T. H. (1993). *Process innovatiòn: Reengineering work through information technology.* Cambridge, MA: Harvard Business School Press.

Dirkx, J. (1996). Human resource development as adult education: Fostering the educative workplace. In R. Rowden (Ed). *Workplace Learning.* San Francisco, Jossey-Bass

Dooley, C. R. (1945). *The training within industry report, 1910-1945.* Washington, DC: War Manpower Commission Bureau of Training, Training Within Industry Service.

Drucker, P. F. (1964). *Managing for results.* New York: Harper & Row.

Dubin, R. (1978). Theory building: Revised Edition. New York: Free Press.

Dubin, R. (Ed.) (1976). *Handbook of work, organization, and society.* Chicago: Rand McNally.

FitzGerald, J. M & FitzGerald, A. F. (1973). *Fundamentals of systems theory.* New York: Wiley.

Gagne, R. M., Briggs, L. J., & Wagner, W. (1988*). Principles of instructional design, 3rd edition.* Fort Worth, TX: Holt, Rinehart & Winston.

Gleick, J, (1987). *Chaos: Making a new science.* New York: Penguin.

Goldstein, T. (1993). *Training in organizations, 3rd edition.* Pacific Grove: Brooks/Cole.

Gradous, D. B. (Ed.) (1989). *System's theory applied to human resource development.* Alexandria, VA: ASTD Press.

Hearn. G. (1958). *Theory building in social work*. Toronto: University of Toronto Press.

Hergenhahn, B. R. & Olson, M. H. (1993). *An introduction to theories of learning, 4th edition.* Englewood Cliffs: Prentice Hall.

Holton, E. F. (1996). The flawed 4-level evaluation model. *Human Resource Development Quarterly*. *7*(1), 5-21.

Holton, E. F. (Ed) (1996). *Academy of Human Resource Development 1996 Conference Proceedings* . Austin,TX: AHRD.

Holton, E. F. (in-press). What is performance: Levels of performance revisited. In R. Torraco (Ed.). *The Research Agenda for Improving Performance*. Washington, DC: ISPI Press.

Jacobs, R. L. (1989). Systems theory applied to human resource development. In D. Gradous (Ed.). *System's theory applied to human resource development.* Alexandria, VA: ASTD Press. 27-60.

Jacobs, R. L. (1996). Human resource development with integrity. In E. F. Holton (Ed) *Academy of Human Resource Development 1996 Conference Proceedings*. Austin, TX: AHRD.

Korten, D. C. (1995). *When corporations rule the world.* San Francisco: Berrett-Koehler.

Lyau, A. & Pucel, D. (1995). *Performance Improvement Quarterly.*

Marshall, A. (1949). *Principles of economics, 8th edition.* New York.

McLagan, P. (1989). Systems 2000: Matching systems theory to future HRD issues. In D. Gradous (Ed.) (1989). *Systems theory applied to human resource development.* Alexandria, VA: ASTD Press. 61-90

Micklethwait, J. & Wooldridge, A. (1996*). The witch doctors: Making sense of the management gurus.* New York: Times Books

Nadler, D., Gerstein, M. & Shaw, R. (1992*). Organizational architecture: Designs for changing organizations.* San Francisco: Jossey-Bass.

Patterson, C. H. (1983). *Theories of counseling and psychotherapy.* Chicago: University of Chicago Free Press.

Passmore, D. L. (1997). Ways of seeing: disciplinary bases of research in HRD. In R. Swanson & E. Holton, *Human Resource Development Research Handbook.* San Francisco: Berrett-Koehler. 114-137.

Rummler, G. A. & Brache, A. P. (1995). *Improving performance- 2nd Edition.* San Francisco: Jossey-Bass.

Ruona, W. & Swanson, R. A. (in-press). Foundation of human resource development. In H. Hall (Ed.), *Human Resource Development.* Unversity Council for Research in Vocational Education.

Schwartz, P. (1991). *The art of the long view.* New York: Doubleday.

Swanson, R. A. (1994). *Analysis for improving performance.* San Francisco: Berrett-Koehler.

Swanson, R. A. (1995). Human resource development: Performance is the key. *Human Resource Development Quarterly*. *6*(2), 207-213.

Swanson, R. A. (1996). In praise of the dependent variable. *Human Resource Development Quarterly*. *7*(3), 203-207.

Swanson, R. A., & Gradous, D. (1988*). Forecasting financial benefits of human resource development.* San Francisco: Jossey-Bass Publishers.

Swanson, R. A., Horton, G. R., & Kelly, V. (1986). Exploitation: One view of industry and business. *Journal of Industrial Teacher Education, 25*(1), 12-22.

Swanson, R. A. & Torraco, R. J. (1994). The history of training. In L. Kelly (ed.), *The ASTD Technical and Skills Training Handbook.* New York: McGraw-Hill.

The American heritage college dictionary (1993). Boston: Houghton Mifflin

Torraco, R. J. (1997). Theory building research methods. In R. Swanson & E. Holton, *Human Resource Development Research Handbook*. San Francisco: Berrett-Koehler. 114-137.

Torraco, R. J. & Swanson, R. A. (1995). The strategic roles of human resource development *Human Resource Planning. 18*(4), 10-21.

Thurow, L. (1993). *Head to head.* New York: Warner Books.

Tolman, E. C. (1932). *Purposive behavior in animals and men.* New York: Naiburg.

Weisbord, M. (1987). *Productive workplaces.* San Francisco: Jossey-Bass.

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Systems Theory as a Foundation for HRD

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The paper investigates the contribution of systems theory to HRD. It defines this evolving field in terms of its scope and meaning and underscores why systems theory must be a foundational theory. It offers a framework to organize themes emerging from the literature of how systems theory supports HRD. Finally, some current challenges and how systems theory relates to the disciplines of economics and psychology are discussed.

It is widely acknowledged that HRD is a discipline rooted in multiple theories. It is true that HRD utilizes many theories. However, all of these theories do not provide the foundation of HRD. A foundation is the basis on which a thing stands and is comprised of those elements that are essential to its survival. For a profession such as HRD, a foundation must be theoretically sound and its professionals must be well-versed in what comprises that core. Indeed, Warfield (1995) regarded the specification of foundations as central to the progress of a discipline when he stated that, "Science is a body of knowledge consisting of three variously integrated components: foundations, theory, and methodology. Foundations inform theory and the theory informs the methodology" (p. 81).

Systems theory has been proposed here as one of three theories that constitute HRD. This proposition is unlikely to be met with much opposition as many professionals and scholars have acknowledged that it is an essential component of HRD work. While many are committed to systems theory implicitly, if not explicitly, the incorporation of it into our foundational base, theories, and methodologies has yet to fully take hold. The goal of this paper will be to investigate the contribution of systems theory to HRD.

A Review: What is Systems Theory?

Systems theory is simply a theory concerned with systems, wholes, and organizations. Beyond this elementary description, there is not one correct way to define it. Even Von Bertelannfy (1968) who is widely acknowledged as the father of general system theory does not offer one clear definition but rather focuses on describing its scope and meaning.

Scope Describing this burgeoning theory is increasingly difficult as various facets of the approach develop. Multiple fields claim to be descendants of systems theory. Although all these related fields are distinctively different, they align in their concern with system. Four of these fields, in particular, are dominating current discussion in systems theory.

General Systems Theory. General systems theory is known for focusing multiple disciplines on wholes, parts, the organization and connectedness of the various parts, and the relationships of systems to their environment.

Cybernetics. Cybernetics is the science of information, communication, feedback, and control both within a system as well as between a system and its environment. Its focus is more on *how* systems function, rather than the *structure* issues emphasized in general systems theory. The result of much of its core work has been defining heterogeneous interacting components such as mutuality, complementarily, evolvability, constructively, and reflexivity (Joslyn, 1992).

Chaos. Chaos theory is the "qualitative study of unstable aperiodic behavior in deterministic non-linear dynamically systems" (Kellert, 1993, p. 2). This theory revolutionized science through its discovery that complex and unpredictable results were actually not random but, rather, could be expected in systems that are sensitive to their initial conditions. Behavior

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that had been assumed to be random in systems of every type was actually found to be bounded and operating within recognizable patterns. Now it is widely recognized that forces in a system endlessly rearrange themselves in different, yet similar patterns. The resulting hidden qualitative pattern is coined chaos, fractal, or strange. Chaos theory seeks to understand this ordered randomness and enables scientists to discover and study chaotic behavior.

Complex Adaptive Systems. This sub-field has emerged most recently out of chaos theory. This field inquires into a more holistic view of the behavior of complex systems. Recent research has revealed that chaos is only one of four possible states into which behavior of complex systems may be classified (Phelan, 1995). The theory of complex adaptive systems proposes that complex systems emerge and maintain on the edge of chaos—the narrow domain between frozen constancy and chaotic turbulence (Heylighten, 1996). It proposes that systems function in an area of complexity between chaos and order. Furthermore, systems in this state conduct self-organizing and learning processes which include structural change through self-renewal (replication, copy and reproduction), nonlinear flows of information and resources, and "far-from-equilibrium conditions that create a dynamic stability where paradox abounds" (Dooley, 1996, p. 20).

Meaning The meaning of systems theory may do more to define it than the than the descriptions offered above. A synthesis of literature illuminates that systems theory is a few distinct things. It is (a) an ontology—a philosophy of nature & systems, (b) an epistemology—a way to view or understand the world, and (c) a unifying theory

***An Ontology**: The Nature of the World & Systems.* Systems theory began with a reorientation of the philosophy of nature. Systems theory is, at its most fundamental level, a belief about the world—"a belief that the world is made up of set(s) of interacting components, and that those sets of interacting components have properties, when viewed as a whole, that do not exist within any of the smaller units" (Heylighten & Joslyn, 1992). Systems theory reveals a multi-tiered world comprised of sub-systems within systems within environment—all of which are regulated through a set of relationships. Secondly, systems theory provides a storehouse of information about the nature of systems. New discoveries about systems' structures and processes offer increasing detail crucial to understanding the basic workings of the world.

***An Epistemology**: A Way to View the World.* Systems theory is also a fundamentally different way of viewing reality. It is now thought to be complement, rather than a substitute to more specialized ways of seeing the world. It is all-embracing, incorporating reductionist perspectives as simply one aspect of a general conceptualization. A premise of systems theory is that systems ultimately are mental constructs. Systems theory, or systems thinking, fosters a way of understanding the world in a more holistic way. This way demands that the pieces of the world are not viewed separately. Rather, the theory provides a way to see and know the world—realizing the connections and the dynamics that make the whole something more than the sum of its parts.

Although systems theory contributes the two distinct meanings described above, a recent article by Laszlo & Laszlo (1997) captures the somewhat indescribable meaning of systems theory when they state:

> Systems sciences defy classification as constituting either an epistemology or ontology. Rather, they are reminiscent of the Greek notion of gnosilogy concerned with holistic and integrative exploration of phenomena and events. There are aspects of the systems approach that are ontological and aspects that are epistemological, and aspects that are at once both and should not be circumscribed to either. (p. 8)

A Unifying Theory. A primary goal of systems theory was to revive the unity of science (Von Bertelannfy, 1968). Systems theory argues that no matter how complex or diverse the world, it is possible to find different types of organization in it and that this organization can be described by principles which are independent from the specific domain being investigated. The uncovering of these general laws will provide a way to analyze and solve problems in any domain pertaining to any type of system. Systems theory, serves as a unifying theory in that it provides a "framework of structure on which to hang the flesh and blood of particular disciplines and particular subject matters in an orderly and coherent corpus of knowledge" (Boulding, 1956, p. 10). Acting as a meta-theory per se, it capitalizes on parallelisms in multiple disciplines and organizes concepts, objects, and relationships in such a way as to overcome the limitations of any one theory.

Why Systems Theory?

After this brief review of the scope and meaning of systems theory the question must be raised as to whether HRD has any choice but to fully embrace systems theory. If we agree that we serve those in organizations, even organizations themselves, we must adopt the science of systems.

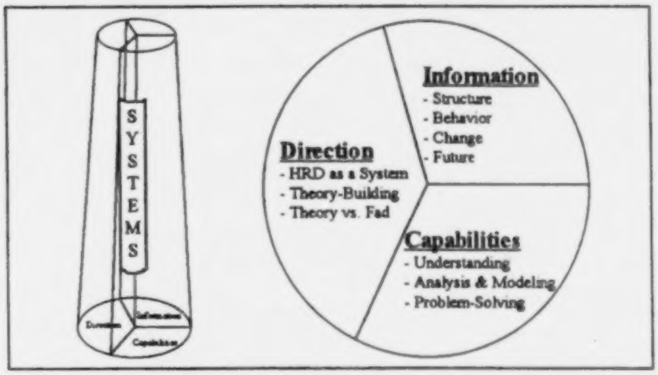
Organizations are systems. A system is defined here as a collection of elements where the performance of the whole is affected by every one of the parts and the way that any part affects the whole depends on what at least one other part is doing. Although there remains some critique of using the "organization as organism" metaphor, organizations can be viewed as living systems of discernible wholes that have lives of their own which they manifest through their processes, structures, and sub-systems (Jaros & Dostal, 1995). The biggest difference between organizations and other living systems is that they are multi-minded, a fact which HRD has never disputed.

Systems theory provides a common conception of organizations—an organizer or conceptual frame through which HRD can ensure holistic understanding of its subject. It also provides analysis methodologies capable of including multiple variables. For these important two reasons, it is viewed as the only meaningful way to comprehend the organization as a system.

The Support Provided to HRD by Systems Theory

It is not possible to provide a comprehensive review of the multiple ways in which systems theory contributes valuable knowledge to HRD. However, some general themes can be drawn from the literature and grouped into conceptual categories. A cross-section of the systems leg of the three-legged stool proposed by Swanson (1998) visually depicts these three categories—three ways that systems theory supports HRD (Figure 1). It provides (a) information: knowledge or data about systems, (b) capabilities: the potential to act, and (c) direction: guidance for a fields' activities and development.

Figure 1. A cross-section of the Systems Leg: Contributions of Systems Theory.



Information Provided by Systems Theory A primary goal of systems theory is to uncover information about systems. During the last 40 years a large amount of knowledge has been compiled that can help HRD professionals understand the basic structure and essences of systems parts and wholes. Four distinct themes, or areas, of information began to emerge from the literature review conducted by this author. A description of each area as well as a cursory discussion of the implications resulting from that knowledge are provided below.

Structure of Systems. Systems theory has sought to understand the basic structure of systems—the way that their parts are arranged, the interrelation of parts to other parts and of wholes to the environment, and the purposes of the system design. Although some systems scientists propose that the structure of a system is hardly separable from its functioning or behavior, others study structure specifically and agree that there are specific elements that provide necessary infrastructure (such as boundaries, feedback structures, and mechanisms that serve specific purposes). Prigogine and Stengers (1984), for example, discovered that systems in diseqillibribum produce new structures spontaneously from the disorder. Field theory, commonly discussed related to organizational development, emerged in the 1970's as an explanation of the empty space in systems that affect the structure. Finally, the issue of levels in complex systems has begun to attract scholarly attention.

Behavior of Systems. The behavior of a system must be understood before it can be influenced. Systems theorists conduct considerable research into the processes and behaviors of a system. It is not possible here to offer a comprehensive inventory of the plethora of information in this area. A brief account, though, demonstrates how extensive it is and how much key information is available for HRD to tap to better understand the behavior of systems.

Katz and Kahn (1966) identified nine common characteristics of open systems that help to inform HRD of the basic character of systems. To date, seventeen laws of complexity have been discovered and can be classified in a matrix particularly relevant to behavior-outcomes (Warfield, 1995). McLagan (1989) discusses processes unique to self-creating systems. Dooley (1996) offers theoretical propositions of complex adaptive systems. The entire field of cybernetics exists for the primary goal of understanding information processing and how non-linear feedback guides systems behavior. Finally, chaos and emerging fields of complexity inform us that apparent random behavior of a system actually reveals an underlying pattern and order and that complex systems are deterministic (that is, they have something that is determining their behavior).

Systems theory acknowledges that change is part of the very fabric of systems. A systems sub-field, population ecology, focuses almost entirely on the potential evolution of the system and posits that actual equilibrium in a system is equal to death, underscoring how systems must evolve, grow, and change to survive. It has taught us to view change as the activation of a system's inherent potential for transformation. The field of ontogeny supports this evolutionary perspective in developing ways to study the history of structural change in a unity without loss of organization in that unity (Dooley, 1995).

Systems theory is also increasingly probing for a deeper understanding of the nature and processes of change in systems. Findings in systems theory inform us that systems sensitive to initial conditions are fairly unpredictable in that minor changes can cause huge fluctuations through amplification. Or, conversely, that some changes in systems can have no apparent affect at all. We also know from the theory that (a) systems behavior gets worse before it grows better, (b) systems tend towards equilibrium (thus, to expect resistance to incremental change), and (c) changes in the essential nature of a system take place when a control parameter passes a critical threshold or biurfication point (Dooley, 1996). From the field of chaos and complexity, we are growing to understand that a system is creative not when all of its components pull in same direction, but when they generate tension by pulling in contradictory directions (Stacey, 1992). Systems theory renders the complex dynamics of change more comprehensible through the uncovering of general principles about the nature of change.

The Future in Systems. There have been many distinguished systems scientists who have also been very active in the study of the future. Systems theory contributed a rather revolutionary element to futures theory in that it surfaced the reality that the future is *emergent*—it is created by and emerges from self-organization and the interaction of its members (Stacey, 1992).

What does this mean? This means that emergent systems are adaptable, evolvable, boundless, resilient and are *not* optimal, controllable, or predictable. The literature emerging out of chaos, in particular, informs us that the future is unpredictable due to a system's sensitivity to initial conditions as well as specific characteristics being discovered about emergent systems. Attempting to perform traditional strategic planning given this information is a rather futile exercise. In a systems approach, rather, the focus of inquiry is on the general character of a system's long-term behavior. There is on-going pressure to develop improved ways of understanding the qualitative patterns that emerge, how to increase the ability of a system to cope with its emerging future, and how to use evolution as a tool.

Capabilities Offered by Systems Theory Systems theory offers a specific contribution that, beyond simply the information described above, affects how things are seen or done. It is in this way that systems theory provides HRD with *capabilities*—the potential to act.

Understanding of Wholes & Complexity. Some might find it strange that this theme has been categorized as a capability. However, it is placed here to sufficiently recognize the perspective contributed by the ontology and epistemology discussed earlier in this paper. Information provided by systems theory is simply raw data without professionals to use it to act in ways that are unique in what can often be a mechanistic, reductionist environment. This perspective enables HRD professionals to see wholes. It enables us, if we accept and utilize systems as a foundational theory, to set critical standards for our profession that demand the unfolding of the whole to seek understanding. The conceptual importance of the "whole" cannot be minimized in HRD, and it has great implications. It acknowledges that systems have a life of their own separate from their parts, focuses on the interactions between the parts rather than the variables themselves, concedes that cause and effect are distant in time and space, and emphasizes that the nature of a system is a continuing perception and deception—a continual reviewing of the world.

Systems theory also offers a unique capability rooted in its perspective on the complexity that organizations face. This includes understanding the environment and its impact on systems as well as the complexities within systems. These types of understandings better position systems professionals to deal with the unpredictability inherent in systems, and in fact, to recognize the need for non-linear feedback and structural instability as a source of innovation and growth. Furthermore, current chaos literature reveals that chaos methods are being discussed as tools to simplify decisions made in conditions of complexity. Guastello (1995) asserts that the tool kit of nonlinear dynamical systems theory consists of attractor and repellor forces, stabilities and instabilities, biurfication and self-organization, fractal geometry, the distinction between evolutionary and revolutionary change, and catastrophes and discontinuous change. Although that may be somewhat overstated, it does redirect the potential of HRD to act and forces the development of a new capabilities.

Methodologies for Analysis and Modeling. Systems theory offers much in the way of describing, analyzing, and creating models of systems. These methods facilitate the analysis and modeling of complex interpersonal, inter-group, and human/nature interactions without reducing the subject-matter to the level of individual agents. The key is to utilize methods that allow the abstraction of certain details of structure and component, while concentrating on the dynamics that define the characteristic functions, properties, and relationships—this simplification is coined 'reduction to dynamics'(Laszlo & Laszlo, 1997). There are multiple analysis and modeling approaches grounded in the systems approach to be reviewed in the literature. Generally they entail identification of multiple elements around and in a system and a refocusing on the whole, integrating what was learned in an understanding of the overall phenomena.

Problem-Solving Approaches. Systems theory offers two things in terms of approaching problem-solving in applied sciences such as HRD. First, systems theorists *actually* start from the problem, not some preconceived notion of a model or a solution. Once the manifestation of the problem has been identified and described, they proceed inward to the sub-systems and outward to the environment (Laszlo & Laszlo, 1997). Second, systems theory is the antithesis of the "one-tool-fits all" mentality. Rather, the theory accepts complexity, freeing problem-solvers from causality and linearity and fostering the identification of patterns and tools that apply to different entities. Furthermore, systems theory encourages drawing on multiple disciplines without being unduly restricted from points of view within those disciplines (McLagan, 1989).

Direction Provided by Systems Theory Finally, it is suggested that systems theory can serve as a guiding force that offers direction for a discipline's activities and future. Interpretations grounded in systems theory can help to build the case for the structure and behavior of HRD.

HRD as a System. There continues to be much discussion about the purpose, function, and definition of HRD (Ruona & Swanson, in-press). Further work on how HRD will conceive of itself is imperative to ensure a robust future for the field. While there have been multiple proposals to conceive of HRD as a system, there continues to be no firm agreement or discussion of the implications of such a conception (Willis, 1997). Systems theory provides guidance for identifying the fields' contexts and boundaries, actual versus desired goals, inputs, processes, and outputs, modes of operation, constraints, various systems states, and roles.

Theory-Building in HRD. Systems theory can enhance the development of theory in HRD in a few ways. First, it serves as a unifier with other disciplines and sciences in the spirit of its founder. Von Bertelannfy (1968) called for the unity of science through an interdisciplinary theory that sought to integrate findings into "an isomorphy of laws in different fields" (p. 48). This isomorphy needs to be built at two levels. On a micro-level, it can assist in the organization of HRD's "various practical experiences into some formal, theoretical structure that will be useful in advancing our practice and that in turn will provide a basis for further theory building" (Jacobs, 1989, p. 27). On a macro-level, systems theory provides a foundation on which to acknowledge how interdisciplinary it really is and contribute to the isomorphy integrating those disciplines.

Secondly, systems theory provides relief from mechanistic approaches and a rationale for rejecting principles based on the closed-system mentality (Kast & Rosenzwig, 1972). The theory requires a new heuristic other than reducing things to their components—that is, focusing on wholes, dynamics, and general theory constructs.

Finally, systems theory provides great insight into the process of theory-building. It offers guidance about the limits of theoretical generalization. Although a motivation undergirding the theory is the unity of science and discovery of general systems principles and laws, it should be noted that systems scientists take great pains to avoid the trap of creating theory that explains 'everything' but actually explains nothing. The goal of systems theory is to build theory that explains a lot and has tentacles linking it to other general theories whose purposes it is to describe a particular class of phenomena (Guastello, 1995).

Theory versus "Fad". Systems theory provides knowledge of the nature and behavior of systems. In this knowledge is once again found a capability—the capability to fight against the propagation of fads. Most of these types of solutions are only partial, focusing on parts that gurus can easily see, rather than a holistic view. They typically lack an overall understanding of complexity and how a system copes with the implications. Systems theory is not a panacea or an easy '6-easy step' kind of thing. It is hard. However, it provides a foundation that facilitates a thorough understanding of complex situations and systems. This is the strongest way to increase the likelihood of appropriate action. Professionals embracing systems theory as a foundation of HRD are best positioned to influence other practitioners to change their perception of the development and the unleashing of expertise in systems. This is the very nature of scientific revolution (Kuhn, 1970).

Current Limitations of Systems Theory as a Foundation for HRD

Even in the limited space of this paper, it would be incomplete to not acknowledge that systems theory has its limitations. Some of the current limitations are noted in Figure 2 in terms of how they impact theory and practice. These issues provide ample challenges to HRD professionals. Most of the issues can be overcome through research, development, and increased dialogue between theoreticians and practitioners as well as those who prescribe to systems theory and those that don't.

Relation to Other Proposed Theoretical Foundations

Swanson (1998) proposes that three theoretical foundations comprise the foundation of HRD. Implicit in this proposal, at least for this author, is that it is the *integration* of these three theories that will equip HRD to contend with the challenges it is called upon to address. In this sense, the whole of the integrated theory stemming from these foundations will be larger than the sum of the parts and will be unique to HRD (Ruona & Swanson, in-press). The disciplines complement one another nicely. There appears to be nothing inherently in conflict between the theories. There are only minor issues that arise and may need to be addressed as HRD begins to integrate the theories.

Figure 2. Current Limitations of Systems Theory as a Foundation for HRD.

Theoretical Limitations	Practical Limitations
• Theory is complex and "big". • Provides more information about dynamics between the parts, than it does about the parts themselves. • Biological model may ignore social-psychological nature of social systems (Katz & Kahn, 1966). • Can be misinterpreted as not offering a definite body of knowledge since not one mainstream approach. • Lacking in reliable methods of "total" conception of the whole. • Requires subjectivity. • Normative implications of systems theory not clarified (Dash, 1995). • Requires more empirical data on systems applications and concepts relative to theoretical formulations. • Risk of losing scientific depth in favor of breadth. • Places great demands on the field in terms of theory-building. • Requires knowledge and skill that are not readily available in academia.	• Can be viewed as constraint to practitioners because time-consuming and costly. • Raises the risk of becoming obsessed with system and forgetting individual (Bierma, 1997). • Responsibilities of the systems practitioners have yet to be clearly articulated and developed. • Necessitates interventions that may lie outside of the mandate of the "client" (Dash, 1995). • Coercive structures in organizations have to be confronted as they undermine the pluralist spirit of systems approach (Dash, 1995).

Economic Theory Economics is quite aligned with systems theory in acknowledging that the ultimate purpose of systems is survival. The two theories agree that systems are teleological—working towards a desired end result. However, current-day teleology, has expanded its notions to differentiate between purposes and goals. It acknowledges that a system may have many goals that must be considered. Systems theorists are cautioned to not blur goals with the idea of functioning. A second disconnect that may arise is an organization's limited view of economics that may discourage truly systemic ideas that do not show their benefits until the long-run.

Psychological Theory Systems theory and psychological theory align in the belief that the organization is comprised of multi-minded individuals engaging in patterned activities (Jaros & Dostal, 1995). However, systems theory goes further to acknowledge that the organization is exists separate from the sum of its parts—a proposition not embraced by psychologists who remain individually-focused. The implications of this disconnect will need to be more fully processed.

Conclusion

This paper has attempted to investigate the contribution of systems theory to HRD. It is hoped that it offers a unique synthesis of the literature in describing its scope and meaning as well as a framework to organize its multiple contributions to HRD theory and practice.

References

Bierma, L. L. (1997). The development of the individual leads to more productive workplaces. In R. J. Torraco (Ed.), Academy of Human Resource Development (pp.652-659). Baton Rouge, LA: AHRD.

Boulding, K. E. (1956). Toward a general theory of growth. General Systems, 66-75.

Dash, D. P. (1995). Systems practice challenges. In K. Ellis, A. Gregory, B. R. Mears-Young, & G. Ragsdell (Eds.), Critical issues in systems theory and practice (pp. 453-457). New York: Plenum.

Dooley, K. J. (1995). Complex, adaptive systems. Unpublished.

Dooley, K. J. (1996). A complex adaptive systems model of organization change. Nonlinear Dynamics, Psychology and Life Sciences. Unknown.

Gleick, J. (1987). Chaos: Making a new science. New York: Penguin.

Guastello, S. J. (1995). Chaos, catastrophe, and human affairs. Mahwah, NJ: Lawrence Erlabaum.

Heylighten, F. (1996). Complex adaptive systems. (On line). Available: http://www.pespmc1.vub.ac.be/CAS.html (1998, January 1).

Heylighten, F., & Joslyn, C. (1992). What is systems theory? (On line). Available: http://www.pespmc1.vub.ac.be/systheor.html (1997, October 21).

Herrscher, E. G. (1995). Why is systemic thinking 'difficult to sell'? In K. Ellis, A. Gregory, B. R. Mears-Young, & G. Ragsdell (Eds.), Critical issues in systems theory and practice (pp. 45-49). New York: Plenum.

Jacobs, R. L. (1989). Systems theory applied to HRD. In D. B. Gradous (Ed.), Systems theory applied to human resource development (pp. 27-60). Alexandria, VA: American Society for Training and Development.

Jackson, M. C. (1995). Beyond the fads: Systems thinking for managers. Systems Research, 12(1), 25-42.

Jaros, G. G. , & Dostal, E. (1995). The organization as a doublet. Systems Practice, 8(1), 69-83.

Joslyn, C. (1992). The nature of cybernetic systems. Available: http://www.pespmc1.vub.ac.be/systheor.html (1998, January 1).

Katz, D., & Kahn, R. L. (1966). The social psychology of organizations. New York, NY: John Wiley & Sons.

Kast, F. E., & Rosenweig, J. E. (1972). General systems theory: Applications for organization and management. Academy of Management Journal, 447-465.

Kellert, S. H. (1993). In the wake of chaos: Unpredictable order in dynamical systems. Chicago: University of Chicago.

Kuhn, T. (1970). The structure of scientific revolutions (2nd ed.). Chicago: University of Chicago.

Laszlo, E., & Laszlo, A. (1997). The contribution of the systems sciences to the humanities. Systems research in the behavioral sciences, 14(1), 5-19.

McLagan, P. A. (1989). Systems model 2000: Matching systems theory to future HRD issues. In D. B. Gradous (Ed.), Systems theory applied to human resource development (pp. 61-82). Alexandria, VA: American Society for Training and Development.

Miller, J. G. (1978). Living systems. New York: McGraw Hill.

Phelan, S. E. (1995). From chaos to complexity in strategic planning. (On line). Available: http://comsp.com.latrobe.edu.au/Papers/chaos.html (1997, October 21).

Prigogine, I., & Stengers, I. (1984). Order out of chaos. New York: Bantam.

Ruona, W.E.A & Swanson, R.A. (in-press). Foundations of Human Resource Development. In H.C. Hall (Ed.), Human Resource Development. Columbia, MO: University Council of Vocational Education.

Sleezer, C.M. & Sleezer, J.H. (1997). Finding and using HRD research. In R.A. Swanson & E.F. Holton III (Eds.), Human Resource Development Research Handbook: Linking research and practice (pp. 183-198). San Francisco, CA: Berrett-Koehler.

Stacey, R. D. (1992). Managing the unknowable: Strategic boundaries between order and chaos in organizations. San Francisco, CA: Jossey-Bass.

Swanson, R. A. (1997). TADDS short (Theory application deficit disorder). Human Resource Development Quarterly, 8(3), 1-3.

Swanson, R. A. (1998). The discipline of human resource development. In R. J. Torraco (Ed.), Academy of Human Resource Development (pp. unknown). Baton Rouge, LA: AHRD.

Von Bertelanffy, L. (1968). General system theory: Foundations, development, applications. New York: George Braziller.

Warfield, J. N. (1995). Demands imposed on systems science by complexity. In K. Ellis, A. Gregory, B. R. Mears-Young, & G. Ragsdell (Eds.), Critical issues in systems theory and practice (pp. 81-88). New York: Plenum.

Willis, V. (1997). HRD as evolutionary system: From pyramid-building to space-walking and beyond. In R.J Torraco (Ed.), 1997 Conference Proceedings (pp. 660-667). Austin, TX: Academy of Human Resource Development.

Psychology and the Discipline of HRD – Contributions and Limitations

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Psychology has long provided a core theoretical base for HRD. Contemporary HRD extends beyond psychology to embrace multiple theoretical bases. This paper examines psychology's theoretical contributions to the discipline of HRD. It is argued that psychological theories are both powerful and limited as a foundation for HRD. Specific psychological theories and their conceptual relationships with economics and systems theory are discussed.

Psychology has been identified as one of the core theories of Human Resource Development (Passmore, 1997, Swanson, 1994). There can be little question that the discipline of psychology has made, and continues to make, major contributions to the discipline of HRD. Indeed, references from industrial psychology, educational psychology, cognitive psychology and developmental psychology are common in our research. It is psychology that keeps HRD's focus on the individual.

However, there are those who practice HRD as if it were little more than applied psychology. This approach results in overemphasis on the individual to the exclusion of other vital components of our discipline. It is the thesis of this symposium, and this paper, that there can also be little question that psychology is inadequate by itself to define the discipline of HRD. The purpose of this paper is to systematically identify some key issues surrounding psychology's contribution to defining the discipline of HRD.

Psychology and HRD

Understanding Psychology as a Discipline In order to understand psychology as a field, one must first differentiate between what are alternately called foundational or framework theories (Wellman & Gellman, 1992) and systems of psychology (Lundin, 1991), versus specific theories. "Framework theories outline the ontology and the basic causal devises for their specific theories, thereby defining a coherent form of reasoning about a particular set of phenomena (Wellman & Gellman, 1992, 9. 342)." A system has been defined as "a framework or scaffolding which permits the scientist to arrange his data in an orderly meaningful way. (Lundin, 1991, p. 2)." In psychology, these systems are also known as movements or schools.

Systems or framework theories then inspire specific theories that propose specific formal propositions. For example, behaviorism is a framework theory or system because is defines a particular set of assumptions about human behavior. Within that system are a variety of theorists (e.g. Watson, Skinner) that vary in their specific propositions about behaviorism, but nonetheless agree as to the underlying epistemology. Our interest here is not in specific theories, but rather the underlying framework theories or systems from psychology that are in turn foundational theories for the discipline of HRD. Continuing the previous example, we will not discuss which theory of behaviorism is appropriate, but rather whether behaviorism is a foundational theory for HRD.

There is no universal agreement among psychology scholars as to which theories are specific versus foundational theories, and some theorists are "bridge" theorists in that they attempt to integrate multiple systems. Furthermore, many noted psychologists can be classified in multiple categories (e.g. is Bandura a behaviorist or a cognitivist) Thus, it is difficult to find one "best" classification. For this discussion, Lundin (1991) and Brennan's (1994) classifications of twentieth century psychology systems have been integrated to generate the following list of candidates to be included as foundational theories for HRD:

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- Functionalism
- Behaviorism
- Gestalt
    - Classic
    - Field Theory
- Psychoanalysis
- "Third Force"
    - Humanistic
    - Existential
- Cognitive
- Emerging Systems
    - Social Psychology
    - Developmental Psychology

Interestingly, some psychologists have called for the creation of a "meta-discipline" of theoretical psychology to recapture the theoretical roots of psychology (Slife & Williams, 1997). They use some of the same language scholars in HRD do to bemoan movement away from theory "toward models, techniques, and micro-theories in the more modern sense (Slife & Williams, 1997, p. 118)." Due in large part to the emergence of applied or functional psychology in the early 1900's (Watson & Evans, 1991), psychology has moved away from the creation of broad theories such as behaviorism and cognitivism, to the scientific testing of theories and models.

Foundation Theories for HRD Within psychology, Swanson (1998) proposes three foundational psychological theories: Gestalt, Behavioral, and Cognitive psychology. Table 1 summarizes these three foundational theories and selected contributions to the discipline of HRD.

Table 1 – Foundational Psychological Theories and their Contribution to HRD

Foundation Theory	Representative Theorists	Contributions to HRD
Gestalt	Wertheimer, Kofka, Kohler, Lewin	• Focus on the whole person • Holistic view of organizations and individuals
Behaviorism	Watson, Pavlov, Thorndike,	• How external environments affect human behavior • Reward and motivation systems • Goal setting
Cognitive	Piaget, Bruner, Piaget	• How humans process information • Foundation for instructional design • How humans make meaning of their experiences

Relationship to Other Core Theories of HRD Swanson (1998) also proposes that the other two foundation theories of HRD are economics and systems theory. Yet unresolved is the relationship between psychology and the other two core domains. While there may be many micro level linkages, at the macro level a possible relationship is that shown below in Figure 1. This figure suggests that:

- *Behaviorism* provides the link between psychology of the individual and economic theory. One of behaviorism's strengths is its emphasis on external reinforcers of human behavior. Human behavior within organizations is deeply affected by organizational performance goals as represented by individual performance criteria and associated rewards. This performance system is largely economic, as described by Torraco (1998). Behaviorism provides the theoretical linkage between the external performance system and individual behavior.
- *Gestalt* psychology is primarily concerned with the integration of the parts of the self into the whole person. Conceptually, this is the same contribution that systems theory makes to understanding organizations—the focus on the whole and the interaction of the parts, rather than reducing it to just its parts. In addition to helping the HRD profession focus on the whole person, the emphasis on holism also logically leads to a holistic view of the person embedded in the organizational system.

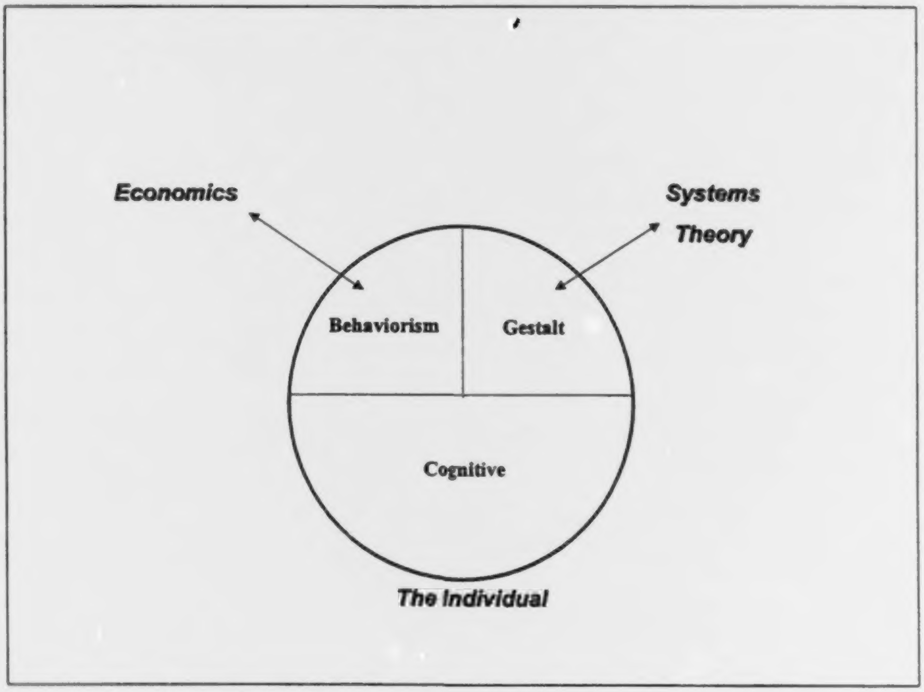
- *Cognitivism* is primarily focused on the self. Cognitive psychology explains how individuals make meaning of what they experience. It emphasizes that individuals are not simply influenced by external factors, but make decisions about those influences and their meaning. In the constellation of psychological theories relevant to HRD, it is cognitive psychology that exclusively focuses on the internal processes of individuals. It helps explain how people learn and how they make sense of the organizational system.

Emerging Foundational Theories of Psychology

There is little question that, of the well-established foundation theories in psychology, these three are the appropriate ones. Others, such as functionalism and psychoanalytic theory simply don't fit. That said, two other emerging psychological theories point out possible weaknesses in this scheme, and offer possible theoretical solutions.

Individual Growth Perspective None of these three theories fully recognizes the potential that humans have to expand and develop capabilities well beyond those immediately apparent. Gestalt psychology comes closest, but still is focused primarily on how people perceive, think, and learn in the here and now (Hunt, 1993). It still leaves unexplained the human processes that underlie the motivation to grow and develop. It is this potential for growth and expansion of human capabilities that undergirds human capital theory in economics.

Figure 1 – Relationship between psychological theories, economics and systems theory at the individual level



Humanistic psychology is still a somewhat loosely formed movement which views humans as self-actualizing, self-directing beings. It is one of the roots for much of adult learning theory (Knowles, Holton, & Swanson, in press). Two of its most recognizable names are Carl Rogers and Abraham Maslow. While still not as theoretically "tight" as behaviorism or cognitivism, it nonetheless makes contributions in explaining individuals' motivation and potential. A core presumption of some HRD models is that employees have intrinsic motivation to grow. While some growth can be explained from the behavioristic notion that people grow to seek organizational rewards, a strictly behaviorist view of this phenomena is much too limited. The three psychological theories proposed above (gestalt, behaviorism, cognitive) may fall short in supporting HRD's position that humans are capable of reaching far higher potential that justifies long-term investment to build expertise.

Social System of Organizations A second area of concern is whether these three psychological theories, along with systems theory and behaviorism, provide adequate theory to account for individuals within the social system of organizations. Organization development specialists are particularly focused on elements of the social system such as organizational culture, power and politics, group dynamics, inter-group communication, and how these social systems change (Cummings & Worley, 1997). The question is whether the core theories proposed provide an adequate foundation to understand the individual within the organizational social system.

It is these very concerns that has led to the emergence of social psychology which studies interactions between people and groups. It too is seen by some as an eclectic discipline lacking any unifying theory (Hunt, 1993), while others are more generous in describing it as still emerging in its theoretical base (Brennan, 1994). In some respects, social psychology is much like HRD in building on other theories while creating new theory of its own. Wiggins, Wiggins, & Vander Zanden (1994) define social psychology as "the study of behavior, thoughts, and feelings of an individual or interacting individuals and their relationships with larger social units (p. 17)." According to them, social psychology consists of four theoretical streams, the first two from psychology and the second two from sociology:

1. *Behavioral perspective* – Social learning and social exchange theory
2. *Cognitive perspective* – Field theory, attribution theory, and social learning of attitudes
3. *Structural perspective* – Role theory, expectation states theory, and postmodernism,
4. *Interactionist perspective* – Symbolic interaction theory, identity theory, & ethnomethodology

Frankly, I offer it more as a "placeholder" than with certainty that it is a foundational theory. What social psychology emphasizes, and seems lacking in this HRD discipline model, is some theory base that defines the social system of an organization. There are deep roots in some aspects of HRD that have relationships with social psychology. For example, Lewin's (a social psychologist) force field theory is a core model for organizational change and development. Social psychology also focuses on humans in groups, which is clearly a major issue in HRD. If social psychology is not the correct foundational theory, then we must identify a component that provides a base for HRD's work in the social systems of organizations.

Summary Thomas Kuhn (1970) cautions us that the emergence of new theory is rarely an orderly or quick process. While both humanistic and social psychology lack the conceptual clarity of cognitivism, behaviorism, and gestalt psychology, they emerged to fill the need to explain human phenomena that the others did not adequately explain. The question for HRD to debate is whether these same holes are important considerations for HRD theory. If so, then these two emerging areas of psychology—or some other theory—should be carefully considered.

Limitations of Psychology

Issue One: Domains of Performance Two predominant performance frameworks are the Rummler and Brache model (1995) and Swanson's expanded framework (Swanson, 1994). Because Swanson's framework uses five performance variables, it is a more powerful lens for this analysis. He suggests that there are three levels of performance and five performance variables as shown in Figure 2.

The dashed box identifies the dimensions of performance in which psychology makes its *core contributions*. By definition, psychology's primary focus is on the individual. Psychologists do consider organizational context, but as environmental influences on the individual, not as a core area of focus.

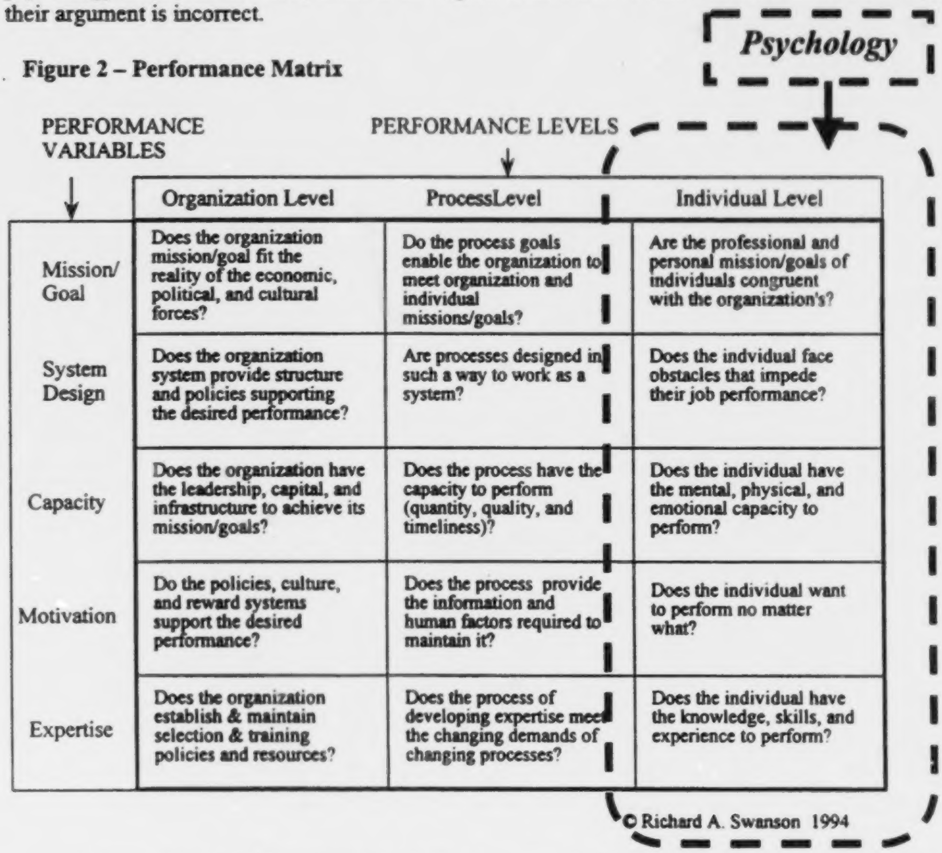
Historically, HRD was also defined at the individual level (Ruona & Swanson, 1997). HRD is increasingly considering all three levels (individual, process, and organizational) as core areas of focus. The implications of this for HRD as a discipline are significant. If the discipline of HRD is a multi-level discipline, then we can draw heavily upon psychology as a foundation discipline, but also must also realize it is inadequate by itself.

The psychological lens, while powerful, leads to incorrect or inadequate conceptions of HRD when used alone. For example, recently Barrie and Pace (1997) stated that:

> *"The question of whether the field of human resource development is in the business of improving* ***performance*** *or of enhancing learning in organizations has not been sufficiently explored. Succinctly put, advocates argue that the field should focus on creating* ***behavioral*** *changes or on fostering a cognitive perspective in organization members (p. 335)."* (emphasis added)

The authors equate the performance perspective with the behavioral perspective in psychology, which is incorrect. Performance theory is concerned with the outputs and outcomes of humans in organizations, and the extent to which cognitive strategies improve them. From an applied psychology definition of HRD, theirs is the logical conclusion. From a broader theoretical base, their argument is incorrect.

Figure 2 – Performance Matrix



	Organization Level	ProcessLevel	Individual Level
Mission/ Goal	Does the organization mission/goal fit the reality of the economic, political, and cultural forces?	Do the process goals enable the organization to meet organization and individual missions/goals?	Are the professional and personal mission/goals of individuals congruent with the organization's?
System Design	Does the organization system provide structure and policies supporting the desired performance?	Are processes designed in such a way to work as a system?	Does the indvidual face obstacles that impede their job performance?
Capacity	Does the organization have the leadership, capital, and infrastructure to achieve its mission/goals?	Does the process have the capacity to perform (quantity, quality, and timeliness)?	Does the individual have the mental, physical, and emotional capacity to perform?
Motivation	Do the policies, culture, and reward systems support the desired performance?	Does the process provide the information and human factors required to maintain it?	Does the individual want to perform no matter what?
Expertise	Does the organization establish & maintain selection & training policies and resources?	Does the process of developing expertise meet the changing demands of changing processes?	Does the individual have the knowledge, skills, and experience to perform?

Issue Two: Building Capacity for Performance Holton (in press) presents an expanded framework for conceptualizing performance domains in HRD that offers another lens within which to consider psychology's contribution to HRD. One important addition is the integration of Kaplan and Norton (1996) two categories of performance measures: outcomes and drivers.

Unfortunately, they do not offer concise definitions of either. For our purposes, outcomes are measures of effectiveness or efficiency relative to core outputs of the system, sub-system, process or individual. The most typical are financial indicators (profit, ROI, etc.) and productivity measures (units of goods or services produced) and are often generic across companies. According to Kaplan and Norton, these measures tend to be lag indicators in that they reflect what has occurred or has been accomplished in relation to core outcomes.

Drivers measure elements of performance that are expected to sustain or increase system, sub-system, process, or individual ability and capacity to be more effective or efficient in the future. Thus, they are leading indicators of future outcomes and tend to be unique for particular business units. Together with outcome measures, they describe the hypothesized cause and effect relationships in the organization's strategy (Kaplan & Norton, 1996). Thus, drivers should predict future outcomes. For example, for a particular company, return on investment might be the appropriate outcome measure which might be driven by customer loyalty and on-time delivery, which in turn might be driven by employee learning so internal processes are optimized. Conceptually, performance drivers could be added as a third axis to Swanson's performance levels and performance variables.

This lens further defines the limits of psychology's contribution to HRD:

- At the individual level, psychology pays only limited attention to building future capacity for individual performance.
- At other levels, performance drivers are not an area of focus for psychology.

Some areas of psychology are pre-occupied with current performance and outcomes, while HRD has a more balanced view of building capacity for future performance in addition to present performance.

Table 2: Performance Domains and Metrics

Domains of Performance	**Typical Metrics for Measuring Performance Domains**	
	Performance Outcomes	**Performance Drivers**
Mission	Economic Returns External metrics Market Share Profitability Mortality rate Poverty level	Societal benefits Innovation Knowledge capital Management/leadership Strategy Social responsibility
Process	Customers Quality Cost Time Product Features Market share (in product category)	Customer (needs satisfaction) Quality Innovation
Critical Performance Sub-system (team, dept., etc.)	Team effectiveness Structural sub-units performance Productivity (resource efficiency) Internal metrics Work outputs	Innovation Team/Group climate Management/leadership Ethical Performance
Individual	Productivity Work Output	Knowledge, Expertise Learning Renewal and growth Human Relations Ethical Performance Turnover Absenteeism

Learning About Research Methodology from Psychology

In addition to exploring theoretical contributions from psychology, it is also worth exploring the contributions psychology can make to our discipline through its research methodology. Psychology is well known for its rigorous research. I confess to occasionally being envious of the exceptional quality and rigor of their research and journal articles. Who can question the quality of the HRD related research published in *Personnel Psychology* or the *Journal of Applied Psychology*? I believe we have much to learn from psychology that can raise the quality of research in HRD.

At the same time, I have also come to realize that psychologists have become dangerously close to becoming "methodologically constipated". Let me relay a story. I recently submitted an article to several psychology journals that was rejected. This particular study was a longitudinal one that integrated a number of variables that had previously been studied separately in psychology literature, but never jointly. The purpose of the article was to examine their joint impact on turnover.

I was appalled at the suggestions from some reviewers. All reviewers agreed that the variables chosen were present in the system under study and, yes, it would be nice to study them jointly. But, as often happens, the methodology gets messier (though not invalid) when studying larger systems. What was appalling was that some reviewers actually suggested that I throw away many of the variables in order to make the methodology cleaner! Despite their agreement that the system of variables needed to be studied, they would prefer cleaner methodology to attempting to answer meaningful questions. While some could accuse me of sour grapes, the fact that a reviewer would even consider this suggestion suggests that there is a tendency for research in psychology to lose sight of the purpose for which the research is being conducted.

HRD as a discipline has much to learn from psychology research:

- Their commitment to rigorous research is admirable.
- The tradition of research leading practice is much more firmly rooted in psychology than HRD.
- Psychology has a stronger commitment to developing valid and reliable measures of constructs.
- Quantitative research methods are extremely strong.

At the same time, HRD has some research traditions developing from which psychology could also benefit.

- Qualitative research seems rare in industrial and educational psychology. These are powerful tools for theory development that are important to HRD research.
- Whole systems research is difficult, unwieldy, complicated, and inherently messy---but necessary. I do not believe that we can always study human systems in organizations by piecing together series of limited scope studies. Much like the business strategy researchers, we have to learn how to study bigger systems.
- HRD researchers in general have a stronger commitment to linking their research to practice. As such, they are more willing to let practice drive research, rather than just looking to theory.

Conclusion

As part of a series of papers on the core theories of HRD, this paper was primarily designed to initiate an ongoing dialogue to define the discipline of HRD. HRD has, and always will have psychology as one of its core foundations. It is psychology that reminds us that our discipline is one concerned with humans in organizations. It is important that we recognize its contributions, as well as its limitations as a lens through which to view HRD.

References

Barrie, J. & Pace, R. W. (1997). Competence, efficiency, and organizational learning. Human Resource Development Quarterly, 8, 335-342.

Brennan, J. F. (1994). History and systems of psychology. Englewood Cliffs, NJ: Prentice-Hall.

Cummings, T. G. & Worley, C. (1997) Organization Development and Change - 6th edition. Cincinnati, OH: Southwestern Publishing Co.

Holton, E. F. III (in press). Performance domains: Bounding the theory and practice. In R. Torraco (Ed.) Advances in Developing Human Resources: The Research Agenda for Performance Improvement, 1. San Francisco: Berrett-Koehler.

Hunt, M. (1993). The story of psychology. New York: Doubleday.

Kaplan, R. S. & Norton, D. P. (1996). The balanced scorecard. Boston: Harvard Business School Press.

Knowles, M. A., Holton, E. F. III, & Swanson, R. A. (in press). The Adult Learner. Houston, TX: Gulf Publishing.

Kuhn, T. S. (1970). The structure of scientific revolutions. Chicago: University of Chicago Press.

Lundin, R. W. (1991). Theories and systems of psychology. Lexington, MA: Heath and Company.

Passmore, D. L. (1997) Ways of seeing: Disciplinary bases of research in HRD. In R. Swanson and E. Holton (Eds.) Human resource development research handbook: Linking research and practice (pp. 199-214). San Francisco: Berrett-Koehler.

Rummler, G. & Brache, A. (1995). Improving performance: Managing the white space on the organization chart. San Francisco: Jossey-Bass.

Ruona, W. E. A. (1998). Systems theory as a foundation for HRD. In R. Torraco (Ed.) Proceedings of the 1998 Academy of Human Resource Development Conference. Baton Rouge, LA: Academy of Human Resource Development.

Ruona, W. E. A. & Swanson, R. A. (1997). Foundations of human resource development. Human Resource Development Research Center, University of Minnesota.

Slife, B. D., & Williams, R. N. (1997). Toward a theoretical psychology: Should a subdiscipline be formally recognized? American Psychologist, 52, 117-129.

Swanson, R. A. (1998). The discipline of HRD. In R. Torraco (Ed.) Proceedings of the 1998 Academy of Human Resource Development Conference. Baton Rouge, LA: Academy of Human Resource Development.

Swanson, R. A. (1994) Analysis for improving performance. San Francisco: Berrett-Koehler.

Torraco, R. (1998). Economics as a foundation for HRD. In R. Torraco (Ed.) Proceedings of the 1998 Academy of Human Resource Development Conference. Baton Rouge, LA: Academy of Human Resource Development

Watson, R. I & Evans, R. B. (1991). The great psychologists: A history of psychological thought. New York: HarperCollins.

Wellman, H. M. & Gellman, S. A. (1992). Cognitive development: Foundational theories of core domains. In M. R. Rosenzweig & Lyman W. Porter (Eds.) Annual Review of Psychology pp. 337-375, 43.

Wiggins, J. A., Wiggins, B. B., & Vander Zanden, J. (1994). Social Psychology-5th edition. New York: McGraw-Hill.

Economics—Human Capital Theory and Human Resource Development

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The development of a theory base to support the rapidly growing field of HRD is the most important issue facing HRD scholars today. The demands upon HRD practice to meet the needs of a diverse workforce in a rapidly changing work environment have already far outstripped the ability of HRD's emerging theory base to guide future research and practice. If HRD is to grow beyond its present stage, it needs a rich and comprehensive theory base. Scholarly attention to HRD theory development is needed. This paper argues for including economics as a central element of HRD's theoretical foundation.

This paper addresses the most important issue facing HRD scholars today—developing a theoretical foundation to provide the intellectual basis for the further development of the HRD field. The increasing demands upon HRD practice, and the need for research to guide practice, have already far outstripped HRD's emerging theory base. HRD is among the youngest disciplines in the social sciences. If HRD is to grow beyond its present stage—now barely into the "adolescence" of its life, it needs its own unique theory base. An important need exists for further theory development in HRD.

Beyond directing the attention of HRD scholars to theory building, the main premise of this paper is that economics be included as a central element of HRD's theoretical foundation. To this end, the paper discusses economics, human capital theory, and their importance to HRD's emerging theory base. An exposition of the central values and principles in organizations supported by economics is provided. Finally, as a prelude to further theory development in HRD, the nature of theory building is briefly explored.

The Challenge to HRD Posed by Theory

Interrelationships among behavioral sciences such as education, psychology, sociology, and organization behavior necessitate a certain cross-fertilization of theory across these fields. One would expect the theories of related fields that all address human behavior in social contexts, as these fields do, to share common theoretical elements. Theories of learning, motivation, group dynamics, and social/organizational structures are common to these fields. In addition to the elements of theory that are shared among fields, each discipline generates theory unique to its own domains of research and practice. Psychologists and economists, although both representing social sciences, view the world through their own unique disciplinary lenses. The psychologist is more interested in factors related to individual behavior, whereas economics is concerned with the allocation of resources at higher levels of aggregation. Consequently, each discipline relies on distinct bodies of knowledge supported by theory, some of which is unique to that discipline. A theory base robust enough to support the present practices and future developments of a discipline requires a rich, theoretical system synthesized from various theoretical elements, some of which are unique to the field, while others are shared across fields. Building on relevant theories from related fields is an accepted, and, for HRD, a necessary part of theory development. The challenge for HRD scholars is that so much remains to be done in both selecting elements and synthesizing a theory base.

The purpose of this paper, and the symposium within which it is presented, is to stimulate discussion among HRD scholars about the importance of theory to HRD's future development and the rightful components of such a theory base. This paper argues for including economics as a central element of HRD's theoretical foundation.

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What is Economics?

Economics addresses the allocation of scarce resources among a variety of human wants. Economics represents human wants and the scarcity of resources as essential and perennial elements in the study of any human activity. Like other social sciences, economics deals with human behavior that cannot be controlled as can, for example, the physical mechanisms used by an engineer. Economics uses society as its laboratory and cannot engage in the kind of experimentation favored by the physicist or chemist. As with the social sciences in general, economics is not an exact science and predictions of economic developments are subject to error. According to Lewis (1977), however, economics is the social science "with the most sophisticated body of theory—that is, the one with the greatest predictability accuracy of all the social sciences" (p. 43). For comprehensive treatments of economics, please see Samuelson (1980), Milgrom and John (1992), and Shughart, Chappell and Cottle (1993).

What is Human Capital Theory?

While Theodore Schultz' (1961) address to the American Economic Association was the first presentation of research on the return-on-investment in human capital, Gary S. Becker is generally credited as the leading developer of human capital theory. Classical economic theory considers labor a commodity that can be bought and sold. Because of the negative connotations associated with the exploitation of labor by capital, it is understandable that human capital theory is still suspect in some circles. However, unlike the meaning traditionally associated with the term "labor," human capital refers to the knowledge, expertise and skill one accumulates through education and training. Emphasizing the social and economic importance of human capital theory, Becker (1993) quotes the economist Alfred Marshall's dictum that, "the most valuable of all capital is that invested in human beings" (p. 27). Becker distinguished firm-specific human capital form general-purpose human capital. Examples of firm-specific human capital include expertise obtained through education and training in management information systems, accounting procedures, or other expertise specific to a particular firm. General-purpose human capital is knowledge gained through education and training in areas of value to a variety of firms such as generic skills in sales and marketing, or expertise in human resource management. Regardless of the application, Becker considers education and training to be the most important investments in human capital.

Figure 1, Model of Human Capital Theory (below), presents the key relationships in human capital theory and the assumptions underlying these relationships.

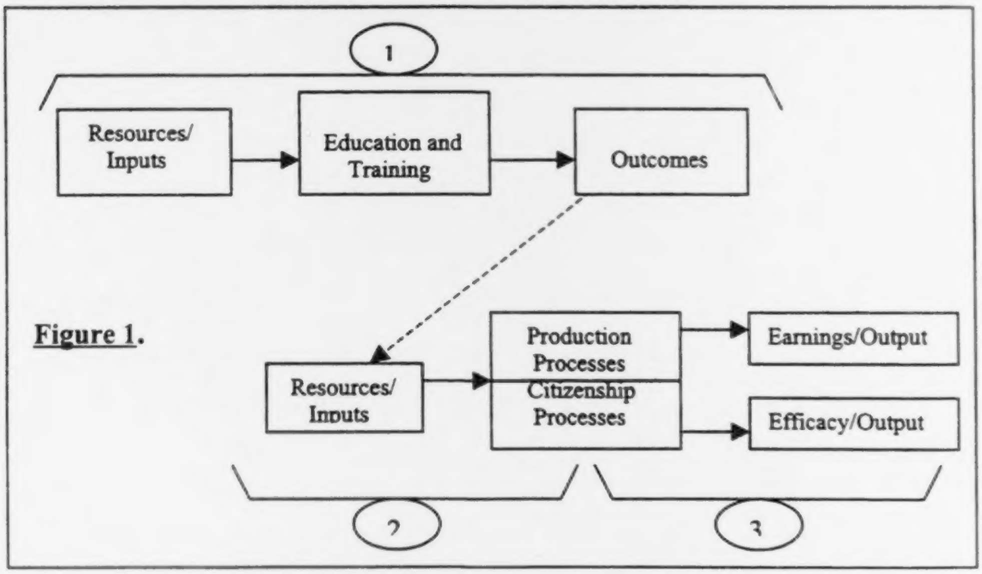

Figure 1.

Key relationships and assumptions of human capital theory are represented in Figure 1 by the numbered brackets 1, 2, and 3.

- ***Relationship 1*** represents the concept of production functions as applied to education and training. The key assumption underlying this relationship is that investments in education and training result in increased learning. Relationship 1 includes the human capital variables assessed using cost-effectiveness analysis.
- ***Relationship 2*** represents the human capital relationship between learning and increased productivity. The key assumption underlying this relationship is that increased learning does, in fact, result in increased productivity.
- ***Relationship 3*** represents the human capital relationship between increased productivity and increased wages and business earnings. The key assumption underlying this relationship is that increased productivity does, in fact, result increased wages for individuals and earnings for businesses. An equally important human capital relationship represented by Relationship 3 is that between the citizenship processes affected by education (e.g., community involvement, voting) and enhanced social efficacy.
- ***The entire human capital continuum*** represented in Figure 1 (i.e., all the bracketed relationships as a single continuum) are assessed using return-on-investment analysis or cost-benefit analysis.

Economics, Human Capital Theory, and HRD

An exposition of the organizational values and principles supported by economics is provided in this section. These values and principles are expressed in the human capital variables discussed here.

Macroeconomic Theory. Macro-economic theory addresses the aggregate performance of an entire economy or economic system (e.g., the European economy or world economy). Macroeconomics is concerned with fiscal and monetary policy and the interaction of major determinants of economic developments such as wages, prices, employment levels, interest rates, capital investments, the distribution of income, and other factors. Macroeconomics is contrasted with microeconomics, which focuses on the individual consumer, family or firm and the determinants each factor (i.e., wages, interest rates) in particular.

Human capital theory has both macroeconomic and microeconomic implications for HRD in important areas. Workforce development at a regional or national level is what economists might call "human capital deepening" on a macroeconomic scale. The increased value of human capital derived from workforce development is likely to influence productivity, wages, prices, and other factors at an aggregate level of the economy. Conversely, the decisions made by HRD professionals in organizations are microeconomic in scope—that is, they influence the economic performance of the individual firm.

Supply and Demand. The supply of, and demand for, education and training affects the competitive position of organizations such that HRD's role becomes central to the organization's long-term viability. Classical economics posits that, on average, scarce resources are more valuable than plentiful resources. Although developed independent of economic theory, Wright, McMahan and McWilliams' (1994) resource-based view of the firm is based on the concept of supply and demand. They suggest that human resources, and HRD in particular, substantially increase the competitive position of the firm because enhance the value of the firm's human resources in ways that are (a) rare, (b) inimitable, (c) valuable, and (d) non-substitutable. Indeed, it is difficult or impossible to compete with firms whose greatest assets are embedded in their people (Barney, 1991).

Opportunity Costs. Opportunity costs are the value of opportunities foregone due to participation in a given project or intervention. By electing a particular course of action among alternatives, one necessary foregoes the opportunities offered by the alternatives. Human capital theory involves opportunity costs at several levels of HRD practice. At the individual level, participation in HRD, especially during normal working hours, incurs the opportunity costs associated with lost productivity on-the-job. This opportunity cost has traditionally been a major source of management reluctance to support certain types of HRD. Similar opportunity costs are involved at the group or department level when work activities are foregone to participate in HRD. At the organization level, the value of opportunity costs is necessarily higher, just as is the value of increased human capital, when applied across the organization. Opportunity costs are the flip side (and sometimes the unnoticed side) of the benefits of HRD.

Agency Theory. Agency theory derives from a branch of organization theory concerned with reconciling the behavior of self-interested individual with conflicting goals within a larger organizational context where collaboration among individuals is sought. Levinthal's (1988) agency theory proposes that principals (i.e., owners) monitor performance of agents (i.e., employees) and use incentives such that employees work to achieve the principal's goals in spite of their own self-interests. Given discretion in the direction and degree of investments in human capital, agency theory suggests that principals are far more likely to promote firm-specific human capital over general-purpose human capital, which increases the ease with which employees can move to other firms.

Production Functions. Production functions are the technical or physical relationships between the inputs and outputs in a value-added process. With respect to education and training investments in human capital, we wish to know the precise inputs (resources) which enter the production (education, development) process, the precise relationship between factors within the production process, and the outputs (benefits) which result from these production processes in education (Lewis, 1977). Production functions in HRD are represented by the training options of in-house development versus vendor training, traditional versus technology-based training programs, the level of involvement and role of supervisors and managers in HRD programs.

In addition to these key human capital concepts, several economic realities facing the organizations served by HRD bear on the development of a theory base robust enough to support and extent HRD research and practice. These realities are:

- The most frequently used measures, of any sort, in organizations are financial measures.
- HRD professionals are reluctant to express their work in financial terms, even though their organizations are financially driven.
- Efficiency is a universal value, not limited to economics. Efficiency is simply a ratio of the optimal level of accomplishments relative to the effort and resources required to achieve them.

Theory Development for HRD

Dubin (1978) provides a comprehensive methodology for theory building that is particularly relevant for applied fields such as HRD. More so than other theory building strategies, Dubin's eight-phase methodology for theory building lays out an explicit roadmap for the theorist to follow. The methodology offered by Dubin, a well-known writer on theory and theory building, is frequently used as a template for building theories in the behavioral sciences. The eight phases of theory building are: (1) units (i.e., concepts) of the theory, (2) laws of interaction (among the concepts), (3) boundaries of the theory (the boundaries within which the theory is expected to apply), (4) system states of the theory (conditions under which the theory is operative), (5) propositions of the theory (logical deductions about the theory in operation), (6) empirical indicators (empirical measures used to make the propositions testable), (7) hypotheses (statements about the predicted values and relationships among the units), and (8) research (the empirical test of the predicted values and relationships). The first five phases of the methodology represent the theory building component of Dubin's model, and the last three phases represent the process of taking the theory into real world contexts to conduct empirical research. Although theorists must consider the entire scope of Dubin's model for effective theory building, theory building and empirical research are often separated, and each of these is conducted as a distinct research effort.

Economics is Central to HRD Theory. The values and principles supported by economics and human capital theory discussed above are part of the basic fabric of the organizations in which HRD professional carry out their work. Ideology aside, the reality in our culture is that economic choices are among the most important decisions made in the workplace. Given the centrality of economics, the question for HRD theory is not, "is economics an element of HRD theory?" but rather, "how important is economics as an element of HRD theory?"

References

Barney, J. (1991). Firm resources and sustained competitive advantage. Journal of Management, 17, 99-120.

Becker, G. S. (1993). Human capital: A theoretical and empirical analysis, with special reference to education (3rd ed.). Chicago: University of Chicago Press.

Dubin, R. (1978). Theory building (2nd Ed). New York: Free Press.

Levinthal, D. (1988). A survey of agency models of organizations. Journal of Economic Behavior and Organization, 9, 153-185.

Lewis, D. R. (1977). An introduction to the economics of education. In W. G. Meyer (Ed.), Vocational education and the nation's economy. Washington, DC: American Vocational Association

Mosier, N. R. (1990). Financial analysis: The methods and their application to employee training. Human Resource Development Quarterly, 1(1), 45-63.

Samuelson, P. A. (1980). Economics (10th Ed). New York: McGraw-Hill.

Schultz, T. W. (1961). Investment in human capital. American Economic Review, 51(1), 1-17.

Stiglitz, J. E. (1975, June). The theory of 'screening' education and the distribution of income. American Economic Review, (3), 283-300.

Torraco, R. J. (1997). Theory building research methods. In R. A. Swanson and E. F. Holton, (Eds.), Human resource development research handbook. San Francisco: Berrett-Kohler.

Wright, P. M., McMahan, G.C. & McWilliams, A. (1994). Human resources and sustained competitive advantage. International Journal of Human Resource Management, 5, 301-326.

Effectiveness of on-the-job training

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OJT is perceived as an effective training method. Remarkably there is barely empirical evidence to support this perception. In this paper the focus is on an empirical investigation of the effectiveness of OJT. The results of the study show that the OJT only establish a modest improvement in trainee's sales behavior but this improvement is maintained over a considerable length of time.

Since previous decennium increasing attention is paid to on-the-job training (OJT). In the Netherlands, for example OJT is applied in 12,5% of the companies. It is used most frequently in banking and assurance companies. Various motives are accountable for this growing attention. It is assumed that OJT reduces the transfer problem because the training setting and the work environment are identical which enhances the long term transfer (Jacobs & Jones, 1995). Last years HRD departments experience a constant pressure to invest training dollars as effective as possible. This contributes to the increasing use of OJT in stead of more expensive off-the-job training programs (Rothwell, 1991). An other explanation for the current attention for OJT points at the concept of the learning organization (Jacobs, 1992). OJT fits reasonably well into this concept. The learning organization as a concept emphasises managers' responsibility for creating training opportunities within their department and also stresses the close link between working and learning, which is established in OJT.

Problem statement

Research into the domain of OJT is scare. This conclusion is especially valid for research that pay attention to the effectiveness of OJT. Only a few studies were discovered wherein the focus is on the effectiveness of OJT. In the work of Jacobs the financial benefits of OJT is the key issue (Jacobs & McGiffin, 1987; Jacobs, Jones & Neil, 1992; Jacobs & Hruby, 1996). In two of the three aforementioned studies the financial benefits of OJT exceeded the financial costs for the design and delivery of OJT. Typical for the research of Jacobs and co-authors is that they include only small numbers of trainees and a limited number of variables in their studies. Therefore, these studies provide no profound insight in the (training design) variables which predict the effectiveness of OJT. A study that shed more light on the effectiveness of OJT was carried out by Wexley (1988). In this study pairs of trainees and their trainers were involved. The major finding of Wexley concerns the relationship between trainer and trainee. A sound relationship has a positive impact on the improvement of trainee's behavior.

The conclusion that can be drawn is that in the field of HRD OJT is perceived as an effective training method, while research underpinning this perception is rather scarce. The lack of empirical evidence for the effectiveness of OJT was the starting point for the research project that is described in this paper.

Theoretical framework

The relationship between OJT and effectiveness was explored by reviewing literature on the transfer

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of training. A comprehensive overview is presented in an earlier paper on this subject (see Van der Klink & Streumer, 1997). With regard to the transfer of training evidence was found for the influence of the work environment on the transfer of training. Especially the role of the trainee's manager seems relevant for establishing long term effects of training (Brinkerhoff & Montesino, 1995; Gielen, 1995; Rouiller & Goldstein, 1993). From all the variables trainee characteristics seem to have the most impact on the transfer of training. Empirical evidence exists for the impact of age (Kubeck et al, 1996), trainees' level of education (Gielen, 1995), self-efficacy (Gielen, 1995), perception of training relevance (Ameel, 1992), job involvement (Brown & Leigh, 1996; Gauthier, 1995).

Research questions and design of the study

This paper focuses on the effectiveness of OJT. Two research questions were central in the study:
1) Is OJT an effective training method?
2) Which variables are linked with the effectiveness of OJT.

Design of the study. As a consequence of organizational constrains a pre-test post-test design was found to be most practicable. To determine the impact of the OJT two measurements after the training were scheduled. The first post-test was immediate after the training (O2) and the second approximately 15 weeks later (O3). These two measurements were preceded by a pre-test (O1) at the start of the OJT. Respondents were the trainees (O1,O2 and O3), their trainers (O1,O2) and trainees' managers (O3)

Setting

Organization. The study was carried out in the largest company for telecommunication products and services in The Netherlands: PTT Telecom. The OJT was delivered to telemarketeers in the call-centers. Their job is to communicate by telephone with customers about all the products and services their company offers. Last years a shift was noticeable in the company's strategy. It is not only the task of telemarketeers to provide information but more emphasis is placed on selling products and services to customers. Therefore, frequently attention is paid to employees' sales behavior. One of the tools managers can use to enhance their employees' sales behavior is the OJT offered by the HRD department of PTT Telecom.

Description of the OJT. The OJT can be characterized as a short individual refreshment training. This means a trainer visits the regional call-center for several days and listens to the communication between the employee and the customer. For this purpose the trainer has an additional phone he can plug in which enables him to have direct access to the communication between the employee and the customer. During and between calls the trainer provides feedback to the trainee. The length of the OJT per trainee varies but seldom exceeds one day. When trainers deliver the OJT in a call-center it is common practice to train all telemarketeers within the call-center.

Instrumentation

Below follows a brief description of the content of the instruments and the data collection procedures.

Effectiveness of the OJT. Effectiveness was operationalized as trainees' sales behavior and organizational benefits (level 3 and 4 of Kirckpatrick's model).
After consultation of trainers, managers, sales experts and available training documents a scale was constructed to measure sales behavior. This scale consisted of 25 items and it covered five topics:

opening the conversation, analyzing customer's needs, offering a product/service, dealing with customer's objections, finishing the sales conversation.

To measure organizational benefits of the OJT it was found to be most practical to use the data that is stored in the management information system. This information is available for call-centers but not for individual trainees. Since all or almost all the employees in a call-center participate in the OJT this is not perceived as troublesome. From the management information system data was used with regard to the monthly sales. This information was received for a time interval of nine months: from three months before to three months after the deliverance of the OJT in the call-centers.

Training characteristics. Two variables were used to measure training characteristics. A scale that consisted of 9 items was used to measure trainee's perception of the quality of the deliverance of the OJT. Also one item was included to measure the length of the OJT.

Work environment characteristics. As the work of Baldwin & Ford (1988) proofs apart from training design characterises also trainee characteristics and work environment characteristics are linked with the effectiveness of training. The role of work environment seems especially relevant for OJT because the work environment serves as the training setting. Six variables were included in the data collection: feedback of manager, feedback of colleagues, support of manager, support of colleagues, workload, and opportunity to use the training content in daily work.

Trainee characteristics. For self-efficacy, job involvement and perception of relevance of the OJT as much as possible existing scales were used. For example, the 6-item scale of Lodahl & Keiner (1965) was used to measure job involvement. Single items were used to measure the following variables: sex, age, experience as a telemarketeer, hours on telephone per week, education, job-related training.

Data collection procedures. With exception of the measurement of the organizational benefits, data was collected with the use of written questionnaires. As indicated above data was collected from trainers, trainees and trainees' managers. The questionnaires for the trainers and the managers focused only on trainees' job behavior. This was also included in trainees' questionnaires, together with the characteristics of the training, the work environment, and trainee's characteristics. The items of the scales were phrased, whenever possible, in statements. The agreements was rated on a 5-point Likert-type scale. For the measurement of trainees' sales behavior items with a 7-point rating scale were used.

The O1- and O2-questionnaires for the trainees were handed out to them by the trainers. The O3-questionnaires were mailed to trainees individually. Each trainee questionnaire contained a letter to explain the aim of the study and to motivate trainees to participate. Trainees' managers were asked to persuade their subordinates to return their questionnaires.

Respondents. In the organization there are 64 regional call-centers. These are divided into two divisions: consumers and business. The latter operates at the market for business enterprises, while the former is dedicated to serve individual customers. Trainees of 7 regional call-centers were involved in this study. With exception of one all were operating within the individual customer segment. At the start of the study there was no information available regarding the total number of trainees within these 7 call-centers.

Results

Due to the limited length of the paper no attention is paid to the data stemming from the questionnaires of trainers and trainees' managers.

Response. During the data-collection phase it turned out that in one of the 7 call-centers the OJT was stopped in a very early phase of the deliverance. From this call-center only 2 trainee's O1-questionnaires were collected. In an other call-center the deliverance already started. From this call-center only O2- and O3-questionnaires were collected. The following number of trainees' questionnaires were received: 49 O1-questionnaires, 39 O2-questionnaires and 37 O3-questionnaires.

Treatment of the non-response. A comparison is made of trainees that mailed one, two or all three requested questionnaires. For this purpose use was made of oneway analysis of variance. Results show that there are no indications that the number of returned questionnaires is linked with characteristics of the trainee, the training or the work environment. Also no link with trainee's sales behavior was discovered. Thus selective non-response did not occurred. In total 36 trainees were included in the data analyzing process. These trainees returned all three or two out of three questionnaires. For the trainees that mailed two of the three questionnaires, the values of the variables stemming from the missing questionnaire were replaced by the variable group mean, or scores were estimated with the use of the average increase between two time intervals. This latter procedure was applied to trainees' sales behavior and job involvement because the performed *t*-tests indicated that the values of these two variables changed over the three time intervals. The estimation of scores was applied to 6 trainees that did not returned the O1-questionnaire, 3 trainees that did not mailed the O2-questionnaire, and 11 trainees where the O3-questionnaire was missing.

Reliabilities of the scales. For the majority of the scales Cronbach's alpha was above .70. For several scales the reliability varied between .60 and .70 which was found acceptable. Reliabilities were computed with the observed scores. Thus estimated scores were excluded from the computation of the relaibilities.

Deliverance of the OJT. Deliverance took place in the last three months of 1995. In some call-centers the OJT deliverance took place in one month, in other call-centers the deliverance was spread over two months. The average duration of the OJT per individual trainee was 4.68 hours. For 8 trainees the OJT the length of the OJT exceeded the five hours. The quality of the deliverance was perceived as high (M=3.96, sd .36, n=32). The modest standard deviation of .36 refers to the fact that trainees agreed upon the high quality of the OJT deliverance.

The effectiveness of the OJT. First attention is paid to trainees' sales behavior scores. Sales behavior was measured with 7-point rating scales. At the start of the OJT trainees' sales behavior scores (M=5.10, sd .69) are slightly below the sales behavior scores at the end of the OJT (M=5.37, sd .67). Thus the OJT resulted in minor positive changes (.27) in trainees' sales behavior. However, the results of the performed *t*-test show this modest progress is statistically significant (t=5.13, df = 32, p .00, one-tailed). Although the average progress is modest an inspection of the individual trainees' sales behavior scores shows that five trainees did not improve their sales behavior but for them the OJT resulted in a decrease in behavior. The largest decrease is -.44. On the other hand some trainees gained a higher increase in behavior. The highest increase in sales behavior is 1.05.

To investigate the transfer of the OJT a comparison of the O2-scores and O3-scores (rated 15 weeks after the completion of the OJT) was carried out. The comparison of the trainees' ratings indicated that no significant change in sales behavior occurred (t=.83, df=33, p .41, two-tailed). Between O2 and O3 the average increase in sales behavior scores was .04. Inspection of the individual trainee transfer scores shows that for 10 respondents there was a negative transfer between O2 and O3. The largest decrease was -.52. For other trainees the increase between O2 and O3 was higher than the mean score of .04. The highest transfer score is .92. In other words there exists some variation in progress and transfer within the respondents group.

Further inspection of the monthly sales of the seven call-centers took place. Information extracted from the management information system was available only for the call centers operating within the individual consumers segment. Because one of the seven call-centers involved in this study operates within the business enterprises segment, 6 call-centers remained. From these six call-centers one was excluded because the OJT was interrupted shortly after the start. Thus from 5 call-centers data regarding the monthly sales was available. The monthly sales of these 5 call-centers were compared with the sales of the other 26 call-centers within the consumers segment where the OJT was not delivered. This group of 26 call-centers served as a control group. Three time intervals were constructed: the three months prior OJT, the month(s) OJT was delivered, and the three months after deliverance of the OJT. Because the moment of deliverance and the duration of the OJT per call-center varied for each individual call-center these time intervals were constructed. In Table 1 the results of the sales per time interval are displayed.

A comparison of the sales before and after the deliverance of the OJT shows that in 4 of the 5 call-centers a significant increase in sales is established. However, the call-centers in the control group also show in this period a n improved sales performance. Nevertheless, the increase in sales exceed the increase in sales of the call-centers in the control group where no OJT was delivered. For one of the 5 call-centers (named as DHN in Table 1) the comparison of the pre and post sales shows that no increase was realized but that a very modest decrease in sales occurred.

Tabel 1. Monthly sales before, during and after the deliverance of the OJT

Call-center	*average monthly sales (calculated over three months before deliverance OJT)*	*average monthly sales (calculated over the month(s) of deliverance OJT)*	*average monthly sales (calculated over the three months after deliverance OJT)*
call-center ASS	5403 (100%)	6451 (119%)	7592 (141%)
control group (n=26)	10243 (100%)	11308 (110%)	12258 (120%)
call-center DHN	12328 (100%)	12822 (104%)	12257 (99%)
control group (n=26)	10602 (100%)	12391 (117%)	12531 (118%)
call-center ZHZ	5166 (100%)	6942 (134%)	7931 (154%)
control group (n=26)	10243 (100%)	9794 (96%)	12875 (126%)
call-center REP	5733 (100%)	9387 (164%)	11460 (200%)
control group (n=26)	10602 (100%)	11688 (110%)	12875 (121%)
call-center RDN	9286 (100%)	10158 (109%)	12258 (132%)
control group (n=26)	10602 (100%)	12822 (121%)	11941 (113%)

Correlations with progress and transfer. To examine which variables are linked with the progress and transfer of the OJT, two variables were constructed. The first variable 'progress sales behavior', reflects the increase in sales behavior between O1 (start OJT) and O2 (end of OJT). This variable is computed by aftrekken the O2-score of the O1-score for sales behavior. The second variable, namely 'transfer sales behavior', reflects the difference between the O2-score for sales behavior (end of OJT) and the score for sales behavior 15 weeks after the completion of the OJT. Consequently correlations were computed to investigate links between the progress and transfer with characteristics of the trainees, the training and the work environment. First attention is paid to the progress in sales behavior. Due to the limited space only the correlations that are statistically significant are displayed in Table 2.

Table 2. Correlations progress in sales behavior with characteristics of trainee, OJT and work environment [1] [2]

	experience	*job-related training*	*O1 sales behavior*	*feedback manager*	*support manager*	*length OJT*
progress	.30**	-.33**	-.27*	.33**	.40***	-.38**

[1] *** $\alpha < .01$; ** $\alpha < .05$; * $\alpha < .10$

[2] $30 < n < 33$: correlations based on all cases with valid values for the two variables being correlated

Table 2 shows that managerial behavior is closely linked with the progress in sales behavior. Managerial support is the variable with the highest correlation coefficient (.40) and there exists also a correlation with managerial feedback. In total three trainee characteristics show samenhang with trainee's sales behavior progress. Job related training, reflecting the number of days trainees received training for their current job prior to the deliverance of the OJT, is correlated negatively with trainee's progress in sales behavior. Also, the trainee's sales behavior at the start of the training shows a negative correlation with trainee's progress in this area. The trainee's experience as a telemarketeer is positively linked with the progress in sales behavior. Remarkably the duration of the OJT is linked negatively with the progress in sales behavior. Thus the longer the trainee received training, the more modest is the trainee's progress in sales behavior. A closer inspection of this correlation took place with the use of the PLOT function in SPSS. Results of this investigations are that an OJT of less than five hours did establish progress in sales behavior. An OJT of five hours or more resulted in a very modest or even in a regression of sales behavior. A duration of five hours of more was reported by 8 trainees.

Consequently correlations were computed with transfer sales behavior to investigate links with characteristics of trainee, training and work environment. In Table 3 only the statistical significant correlations are displayed. As Table 3 shows only moderate correlations exists with the transfer of sales behavior. Two trainee characteristics show a positive connection with trainee's transfer scores: job-related training and the O2-score for trainee's self-efficacy (rated at the completion of the OJT). Workload is negatively correlated with the transfer.

Table 3. Correlations progress in sales behavior with characteristics of trainee, OJT and work environment [1] [2]

	job-related training	*self-efficacy (O2)*	*workload*
transfer	.23*	.36**	-.23*

[1] ** $\alpha < .05$; * $\alpha < .10$

[2] $33 < n < 34$: correlations based on all cases with valid values for the two variables being correlated

Multiple Regression analysis. Regression analysis, procedure stepwise, were carried out with the progress scores and transfer scores respectively. The results of the multiple regression with progress as dependent variable are displayed in Table 4. For the trainee's progress in sales behavior three predictors were found: managerial support, trainee's sales behavior at start of OJT, trainee's experience as telemarketeer.

Table 4. Multiple regression with sales progress as dependent variable [1]

	Mult.r	*r^2*	*p(F)*	*Beta*	*t*	*p(t)*
support manager	.46	.21	.015	.53	3.55	.002
O1 sales behavior	.60	.36	.005	-.38	-2.50	.020
experience	.70	.49	.001	.36	2.43	.023

[1] $n = 27$

In total these three variables explained 49% of the variance in progress scores. From these three the managerial support functions as the most powerful predictor. 21% of the variance in progress scores is explained by this variable.

As Table 5 shows the multiple regression analysis with transfer as dependent variable resulted in the discovery of one predictor: trainee's self-efficacy at the completion of the OJT (O2-score). This trainee characteristic explains only a limited amount (13%) of the variance in transfer scores.

Tabel 5. Multiple regression with transfer sales behavior as dependent variable [1)]

	Mult.r	r^2	*p(F)*	*Beta*	*t*	*p(t)*
self-efficacy (O2)	.36	.13	.038	.36	2.17	.038

[1)] n = 33

Conclusions and discussion

In this paper two research questions are central. The first questions concerns whether the OJT result in improvement of trainees' sales behavior and increased monthly sales. Indeed the OJT cause an improvement in trainees' sales behavior. Although this improvement is rather modest it is maintained over a long period of time. Further trainees differ in their degree of improvement. For some trainees the OJT results even in a decline of their sales behavior. There are two possible explanations to take into account to explain the limited observed progress in sales behavior. The first one is that these employees already have subtantial experience with their daily tasks. Also they received training for their tasks in the past. Through this experience en prior training they achieved a certain level of performance. Any new training event does not improve their performance significantly, because of the 'ceiling effect'. This occurs expecially when the training event can be characterised as a refreshment training of a rather limited length wich is the case with the OJT in this study. A second explanation might be that trainees overestimated their sales behavior at the start of the OJT, resulting in high scores for sales behavior at the start of the OJT. During the OJT they become aware of the weak spots in their behavior, as a result of the trainer's feedback, and at the completion of the OJT trainees do not perceive a subtantial progress.

Proving whether the OJT cause positive sales results is rather difficult. First because not for all call-centers where training took place figures were available. Second because a change in sales results might also be caused by other variables that were not involved in the data collection (Philips, 1996). Therefore, alternative explanations can not be excluded. Nevertheless this may not be perceived as an escape to avoid drawing conclusions in this area. For four of the five call-centers the monthly sales figures suggest that the increase in sales exceed the increase in sales present in the control group. In one of the five call-centers where deliverance of the OJT took place no increase in sales was reported. A possible explanation for this lack of improvement might be that in this call center the monthly sales were already on a high level before the OJT took place. It is high compared to the other call-centers where the training was delivered but also high compared to the sales of the call-centers within the control group. Possibly in this call-center a 'ceiling effect' is present.

The second research question focuses on the variables that explain the progress and transfer. The findings suggest the contemporary notion that training effectiveness is the result of the interplay between characteristics of the trainee, the training and the work environment (Baldwin & Ford, 1988). The job-related training prior to the OJT and the O1-score for sales behavior are correlated negatively with progress. A possible explanation is that if trainees already received subtantial training for their daily work or they assess their behavior as sufficient at the start of the OJT trainees do need experience the need to improve their behavior. Further it is remarkable that the duration of the OJT is linked negatively with the progress. Perhaps the longer the training the more feedback a trainee recceives that his behavior is less adequate than assessed at the start of the OJT, resulting in lower behavioral scores at the completion of the OJT compared to the start of the OJT.

The degree of transfer correlates positively with trainee's self-efficacy at the end of the OJT, with previous job-related training, and it correlates negatively with the workload. A possible explanation might be that more training in the past reflects also more experience with applying the training content into daily work. In general only a few variables were linked with the transfer, and only one of these three, self-efficacy, was found to serve as a modest predictor for transfer scores. These findings makes it necessary to rethink the theoretical models used to explain transfer of training.

A troublesome point in this study was the participation of trainees. The selected research design with repeated measures proves to be adequate from a theoretical point of view. However, it is a rather vulnerable design to use in the context of HRD. Therefore, it is necessary to rethink the practical consequences of research designs and to search for research designs that are more applicable in the domain of HRD.

References

Baldwin T.T. & Ford, J.K. (1988). Transfer of training: a review and direction for future research. *Personnel Psychology*, 41, 63-105.

Gauthier, F.M. (1995). *Personnel job involvement and organizational climate affects transfer of acquisition*. Paper presented at the AERA conference, San Fransisco, April, 1995.

Gielen, E.W.M. (1995). *Transfer of training in a corporate setting* (dissertation). Enschede: Universiteit Twente.

Jacobs, R.L. (1992). Structured on-the-job training. In: Stolovich, H.D. & Keeps, E.J. (eds.). *Handbook of human performance technology* (133-139). San Fransisco: Jossey-Bass.

Jacobs, R.L. & Hruby, (1996). Comparing the predicted and actual benefits of HRD programs. *Conference Proceedings Academy of Human Resource Development 1996.*

Jacobs, R.L. & Jones, M.J. (1995). *Structured on-the-job training*. San Fransisco: Berrett-Khoeler Publishers.

Jacobs, R.L., Jones, M.J. & Neil, S. (1992). A casestudy in forecasting the financial benefits of unstructured and structured on-the-job training. *Human Resource Development Quarterly*, 2(2), 307-317.

Jacobs, R.L. & McGiffin, T.D (1987). A human performance system using a structured on-the-job training approach. *Performance & Instruction*, 25(7), 8-11.

Philips, J.J. (1996). Was it the training? *Training & Development*, 28-32, March.

Rothwell, W.J. (1991). Invited reaction: thought about on-the-job training and on-the-job learning. *Human Resource Development Quarterly*, 4(2), 319-324.

Van der Klink, M.R. & Streumer, J.N. (1997). *Effectiveness of on-the-job training*. Paper presented at the AERA conference, Chicago, March, 1997.

Wexley , K.N. (1988). A tale of two problems: on-the-job training and positive transfer. In: R.S. Schuler, S.A. Youngblood and V.L. Huber (Eds.), *Readings in personnel human research management* (pp. 330-339). St. Paul, MN: West-Publishing Company.

Finding Their Own Way: Informal Learning and Public School Teachers

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Eighteen teachers were interviewed to examine the informal ways that public school teachers develop professional expertise. Analysis of the data showed that teachers performed three roles during informal learning: knowledge exchanger, environmental scanner, and discoverer. Engagement in these roles was influenced by organizational characteristics such as classroom location, allocation of resources, school policies, evaluation processes, and reward systems. Implications of these findings for facilitating informal learning in the workplace are discussed.

The nature of professional work has changed dramatically in recent years. It involves far greater pressures, more ambiguous and ill-structured problems, and greater uncertainty than ever before (Drucker, 1988). A group of professionals for whom these defining aspects of work especially apply are public school teachers. During the past 20 years the scope and intensity of teachers' jobs have rapidly increased (Hargreaves, 1992). Increasingly, teachers are required to teach more content and subjects to classes containing greater numbers of students with emotional, social, and learning problems, some of which are far more serious in nature than ever before. In addition to teaching responsibilities, the decentralization of decision making in school districts calls for teachers to play an increasingly active role in the management and operation of schools. These changing role expectations have resulted in many new learning needs for teachers.

In large part, school districts rely on formal training and development activities to promote teacher expertise. Districts provide a variety of formal training and development opportunities for teachers, ranging from district-sponsored in-service activities to financial support for professional conferences. The intent of these opportunities is to help teachers develop improved job knowledge and teaching skills, greater understandings of school functions and responsibilities, and greater confidence in their roles as educators.

However, recent studies have shown that professionals learn a great deal through informal experiences in the workplace (Ehly, Retish, & Shokoohi-Yekta, Submitted for publication; Lovin, 1992). The school setting is a teacher's workplace. In this setting teachers informally learn by engaging in such activities as talking and sharing instructional materials with other teachers, reflecting on past experiences, and experimenting with new instructional strategies.

A concern about teachers' reliance on informal learning for developing expertise is that the intensification of their work may constrain their participation in informal learning experiences (Corcoran, 1990). The reality of public school teaching is that most teachers are isolated from their peers for most of the work day and their time is completely committed (Hargreaves, 1992). This leaves little opportunity for informal learning. The impact of increasing work demands on informal learning may be particularly troublesome for novice teachers. The expertise literature has documented that while experts have a wealth of job-related knowledge, experience, and resources, novices, or beginning teachers, possess fairly superficial bodies of knowledge, little relevant experience, and few resources (Gick, 1986). It is possible that, because of these differences, beginning teachers use less effective informal learning approaches (Russell, 1993).

Therefore, if teachers make use of informal learning experiences to develop knowledge about their jobs, their schools, and themselves; and, if the nature of a teacher's job provides little time or opportunity for such learning, then more must be known about the ways in which teachers with varying levels of experience acquire the knowledge they need to succeed in today's public schools. Information such as this could be used to facilitate professionally growth enhancing interactions among teachers and could also be used to reconsider how school districts presently promote the training and development of teachers.

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Research Questions and Methodology

The purpose of this study was to explore the informal ways that public school teachers with varying levels of experience develop professional expertise. Accordingly, the research questions that guided this investigation were: (1) What kinds of knowledge do teachers acquire in the workplace? (2) What sources do teachers use to acquire this knowledge? (3) What methods do teachers use to acquire this knowledge?

Two schools in the Iowa City Community School District (ICCSD) served as the research sites in this study. Iowa City is located in the southeastern region of Iowa and is home to the University of Iowa. The city is a fairly small community of 65,000 residents, most of whom are professional families affiliated with the university. The ICCSD consists of 16 elementary schools, 2 junior high schools, and 2 senior high schools. At the time of the study, the school district enrolled 9,947 students and employed 730 teachers. For the purposes of this study, beginning teachers were defined as those teachers with less than two years of teaching experience, developing teachers had between two to five years of teaching experience, and experienced teachers had more than five years of teaching experience.

The first of two schools participating in this study was a junior high school, which enrolled 766 students in grades 7 and 8 and employed 55 teachers. There were no beginning teachers in this junior high at the time of the study. Nine experienced teachers and two developing teachers participated in this study. Three of the nine experienced teachers were male. Both developing teachers were female. Teacher-participants taught language arts, math, science, physical education, health education, and special education.

The second participating school was a senior high school, which enrolled 1592 students in grades 9 through 12 and employed 90 teachers. Seven teachers from this school participated in the study: two beginning, one developing, and four experienced. All beginning and developing teachers and two of the four experienced teachers were female. Subjects taught by the teacher-participants included math, social studies, and language arts.

Teachers from these two schools were recruited by open invitation from the principal of each school to participate in this study. Eighteen teachers accepted the invitation and were classified as beginning, developing, or experienced teachers. Each teacher participated in a semi-structured, in-depth interview of one to one and one-half hours conducted by one of the two researchers over a six-month period. In addition to the interviews, numerous visits were made to each school to gain a greater understanding of the school setting where teacher-participants worked.

Data analysis comprised three broad phases within a constant comparative framework (Miles & Huberman, 1994). The first phase consisted of building a set of categories that represented the learning experiences of the teachers and the researchers' general conceptual framework regarding informal learning in the workplace. Seventy-four categories were created and organized into 5 independent dimensions: environmental characteristics influencing informal learning, personal characteristics influencing informal learning, learning sources, learning methods, and teacher responsibilities. Additional rounds of reading and coding led to the addition of a sixth dimension (learning potency) and the creation of additional categories. At this point, two teacher-participants reviewed the categorizing framework and codes. Both teachers reported that the framework and codes were consistent with their interpretations of how teachers informally learn in the workplace.

The accuracy and completeness of the coding process was confirmed in the second phase of data analysis. An iterative coding process was used in which the principal investigator coded the data, the research assistant reviewed the accuracy and completeness of the codings and proposed changes and/or additions to the assigned codes, and the principal investigator reviewed and integrated the research assistant's proposed changes into the data.

The third phase of data analysis consisted of inducing themes relevant to the research questions from the coded data. A matrix of the 10 learning methods and 10 learning sources was constructed for each teacher experience level in each school. These matrices were used to accumulate coded segments of text from the transcripts, field notes, and memos. The accumulated segments of text in each cell of each matrix were then analyzed to induce themes and patterns of meaning within and across schools and within and across teacher experience levels.

Discussion

There is a prevailing perception that schools are places where children learn. But what about the learning needs of those who teach our children? Professional development theorists, such as Smylie (1995), assert that sustained educational improvement will fail unless the emphasis shifts from creating conditions for productive student learning to workplaces where teachers can learn. In order to design such workplaces more must be known about the processes teachers use to learn in these settings. Findings from this study concerning the informal learning processes of teachers, implications of these findings for facilitating teacher learning, and recommendations for future research are presented in this section.

Informal Learning Processes. Teachers learned important types of knowledge by performing three different roles. The first role was knowledge exchanger, in which teachers shared and reflected on others' practice and experiences. The second role was environmental scanner, in which teachers independently scanned and gathered information from sources outside the school. The third role was discoverer, in which teachers actively experimented with new ideas and techniques.

Knowledge Exchanger. The predominant way teachers developed expertise was by sharing and reflecting on others' practice and experiences. Sharing and reflecting occurred when teachers informally talked, observed, shared resources, collaborated and mentored others.

Teachers frequently talked with others to share and reflect on their experiences. According to participating teachers, the most useful people for them to talk with were their peers. One experienced teacher's motivation for participating in this study was to:

> get across...this whole learning thing of how you as a teacher grow and learn...from the wizards in the field...you have to be open to gleaning from those around you...who have been doing it, and that is where you really learn is to let yourself continually be open to growing and learning...from the masters.

Peers provided teachers with information and insights that helped them handle instructional and student problems and concerns, explore innovative instructional strategies and practices, develop technology skills, learn to work with support staff, develop their educational philosophies, and, particularly for beginning and developing teachers, learn about the norms of their work groups and schools. The majority of the participating teachers reported that more experienced peers in the same subject areas or grade levels were the most useful sources for learning job and organizational knowledge.

Teacher talk was often informal and unplanned. Chance encounters during the normal course of the work day, often in such places as the hall corridors or departmental offices, were customary contexts where conversations occurred. Teachers used these encounters, as in the words of one junior high teacher, to "bounce ideas off of someone else in the hall...right when [a problem is] immediate. [That] has made all the difference in the world. I feel like I'm not making all these decisions [by myself] that are very important to these kids."

School duties also provided frequent opportunities for teachers to talk with each other. For example, a requirement at the junior and senior high schools was that teachers had to be in the halls during class switching times. Teachers reported that they frequently exchanged useful information about lessons and students with other teachers during such times. Teachers whose classrooms were not in close proximity to peers expressed frustration in not being able to interact with their colleagues during these times.

In addition to peers, teachers reported that they regularly talked with administrators and students to learn useful information. They talked with administrators to obtain ideas for handling problem parents and student discipline issues, information about technology, and suggestions for improving their teaching. Beginning and developing teachers were found to access administrators for assistance much more than their more experienced counterparts. All teachers reported that they often talked with students to gain a different perspective on the content of lessons, develop a greater understanding of students' instructional problems, and foster student rapport. A high school teacher described the contributions that students made to his learning in this way:

> I know every single day that I come to school I learn something new. I had a kid ask me the other day, "When you talk about a war innocent women and children get killed. What about the innocent men?" Now, in eight years nobody's ever asked me about innocent men. And I'd never thought of it myself. So that kid gave me an entirely new perspective from that, and it's great. So, I learn from them all the time, just like they learn from me.

While all teachers relied on peers, administrators, and students for information, experienced teachers used a much greater variety of sources than less experienced teachers did. Experienced teachers indicated that when they needed to learn something they "feel comfortable asking everyone on the staff," from librarians to guidance counselors. In addition, these teachers frequently consulted with parents, especially those with special needs children, and educational professionals outside the school, such as community service providers and educational specialists.

A second method that teachers used to share and reflect on others' practice and experiences was observation. According to participating teachers, observing others' teach is an excellent method for developing their teaching and classroom management skills. However, teachers reported that school schedules and policies often inhibited them from conducting observations. Several teachers reported that they "stand outside doors of some of the good teachers during free periods" to informally observe the classes of their colleagues. The easiest and most useful means of observing others was found in those situations where teachers shared classrooms or teaching responsibilities.

Resource sharing was a third method that teachers used to share and reflect on others' practice and experiences. A prevalent norm of teachers in the same subject areas and grade levels was to "share materials like crazy and not worry about the other person doing exactly the same thing." Unlike other professions, teachers did not appear to have a high level of proprietary concern about sharing or adapting others' instructional content and materials.

A fourth method that teachers used to share and reflect on others' practice and experiences was collaboration. Collaboration was frequently reported by teachers as a way of pooling expertise among groups of people to collectively address issues that, if left to one individual, would not result in as high a quality an outcome. Common forms of collaboration included: special education work groups, which focused on ways of dealing with the increasing demands of special education programs; building vertical teams, which made decisions concerning the management of their schools; study groups, which studied instructional topics such as innovative learning theory and instructional strategies; and curriculum development work groups, which reviewed and improved school curricula. In addition to accomplishing the intended purposes of these activities, collaborations often resulted in unintended learning outcomes, such as the equitable distribution of work among teachers in work units, unexpectedly creative ideas, increased horizontal communication among teachers at different schools, and improved teamwork skills. Experienced teachers reported far more involvement in collaborative activities than did beginning and developing teachers.

Mentoring was a fifth method in which teachers engaged to share and reflect on other's practice and experiences. Teachers reported that informally observing, being observed by, and talking with their mentors helped them develop their teaching and classroom management skills, as well as acclimate into the school culture. Experienced teachers reported that another form of mentoring, supervising student teachers, was beneficial to their development. In the words of a junior high math teacher, this type of mentoring experience provided him with the opportunity to "examine what and how I teach the way I do...It opens my mind to new ideas and ways of doing things."

Environmental Scanner. In addition to exchanging knowledge with others, teachers independently scanned and gathered information from outside sources.

Memberships in professional organizations were one way in which teachers scanned for information. Such memberships provided teachers with opportunities to scan journals and other publications to learn about recent developments and research in their content area and in learning and instruction. In addition to published materials, memberships provided teachers with opportunities to attend state and national meetings, through which they met, talked with, and developed networks of colleagues.

In addition to professional organization memberships, many teachers reported that they attended educational conferences and workshops in hopes of finding instructional materials and ideas. As a junior high math teacher emphatically stated, "a good teacher is one that knows how to steal. I was at a conference and someone did a presentation using [a geometric software program]. I saw that (snaps fingers), took their ideas, took their lesson plans, everything, and just incorporated it into my own classroom." In addition, teachers reported that they attended conferences and workshops to interact with and develop a network of colleagues.

The Internet was another source of information that teachers scanned. All teachers in this school district have computers in their classrooms, which are hooked up to a district-wide server and the Internet. Participants reported that they were increasingly scanning the Internet for instructional content and materials.

Teachers also scanned for information while engaging in everyday activities outside of the school context. Teachers reported that they were always open and ready to accept any new information that might prove useful to their teaching. An experienced senior high teacher captured the essence of everyday scanning activities when she reported:

> I am always looking...if I meet someone...in a social situation and they say..."I do this," I say, "Hey, great. Tell me a little bit about your job, about the stuff you do, how does it work?" And so I'm constantly learning about this stuff I know I'm going to be teaching about.

Ease of access influenced teachers' decisions to scan a particular source. For example, many teachers reported that funding for professional conferences and workshops played a key role in their decision to attend. Likewise, teachers reported that they were more likely to use the Internet now that they had computers in their classrooms.

Discoverer. Independent experimentation was a third way in which teachers developed expertise. Teachers routinely acted, reflected on their actions, and then either took immediate actions to alter their practice or recorded their future plans to do so. An experienced junior high teacher articulated the integral relationship between reflection and action in this way:

> If something doesn't go right I first look at what I've done and evaluate what I'm doing...my first inclination if a bunch of kids fail my test is that I didn't do a good job teaching, and what can I do to do that better, and how can I re-do that?

Unexpected events catalyzed teachers' reflections. Experiences in which teachers' planned strategies and practice produced surprising or unanticipated outcomes caused disruption in their routines. Faced with such disruptions teachers were impelled to reflect upon gaps between what actually happened and what they expected would happen.

Another feature of teachers' reflections was its solitary nature. In most cases teachers reflected independently. In addition to reflecting on their own, many beginning and developing teachers reported using student reactions as the sole source of information for their reflections. Sole reliance on learner reactions can present a skewed picture of what actually happens during or as a result of instruction, yet these teachers seemed completely unaware of such dangers.

Rarely did reflections in the midst of action cause teachers to divert from their planned course of action. The types of situations where reflections resulted in immediate changes to planned courses of action were somewhat surprising. In classroom management situations less experienced teachers frequently attempted to handle behavioral problems and found that their strategies for dealing with the problems were not working. As the behavioral problems escalated, these teachers tried to determine why the strategies were not working and choose a more appropriate one to regain control of the situation. Other situations where teachers routinely reflected-in-action involved learning new computer skills. In contrast to classroom management situations, the risk involved with making mistakes when learning computer skills was perceived by teachers as quite low and, as a consequence, they took great liberty in experimenting and adapting their behaviors as they "played around with the computer."

In summary, three roles describe the ways in which teachers informally learned new knowledge. As knowledge exchangers, they shared and reflected on others' practice and experiences by talking, observing, resource sharing, collaborating, and mentoring. As environmental scanners, they independently scanned and gathered information from sources outside the school and, as discoverers, they used their reflections as the basis for experimenting with new ideas and techniques.

Implications. Many recent attempts to facilitate teacher learning have failed to effect desired outcomes (Darling-Hammond, 1996; Sykes, 1996). In general, these attempts involved fragmented efforts to improve teacher skills or environmental conditions for learning, but did not systemically align the developmental needs of teachers with existing aspects of the teachers' work environment.

One important finding in this study was the serendipitous nature by which teachers learned from each other. Serendipity embraces the notion that people use their intuition and tacit knowledge to fortuitously place themselves in advantageous situations where learning may occur (Robinson & Stern, 1997). In this study, participating teachers intuitively sensed where they should be and whom they should be around to increase the likelihood that they would learn information of importance. The serendipitous nature of informal learning calls attention to the important role of a community of practice in teacher learning. More experienced teachers had expansive networks, which included teachers across the district, state, and country. However, other teachers' networks were limited to those they knew within the school building and, for some less experienced teachers, were limited to those they knew within their own department. Clearly, opportunities for serendipitous learning increased as a teacher's network of colleagues expanded.

The majority of teachers in this study reported that two forms of organizational support facilitated teacher interaction and networking. First, departmental offices provided places where teachers informally met, talked, and shared ideas. Unfortunately, beginning teachers had the most difficulty using these facilities throughout the day because their classrooms were often located farthest from the offices. Second, mentoring was reported by many teachers as an integral part of their professional development. A commonality of many of these reports was the fortuitous way in which these mentoring relationships evolved. Oftentimes, the sharing of a classroom or a planning period provided teachers with opportunities to form mentoring relationships with more experienced teachers. Teachers used these relationships to work through the messy problems and persistent dilemmas commonly found in professional practice (Schön, 1987). While these two forms of organizational support have potential for facilitating teacher interaction, the reality is that teachers are often inhibited from taking advantage of them because they lack the physical proximity and time to do so.

Three recommendations are proposed for facilitating teacher interaction. First, care needs to be given to classroom assignments. Classrooms need to be strategically assigned so that teachers, especially those in their early stages of development, are located near peers in the same subject area or grade level. A cross-national study of teacher induction practices, reported by the U.S. Department of Education (1997), found that in other industrialized countries, such as Japan and Australia, school systems strategically place novice teachers next to more experienced teachers in the same grade level or subject area to maximize teacher interaction and sharing. In contrast, United States school systems isolate teachers from other teachers and provide them with little feedback or help. American school systems need to reassess the value of conventional practice that bases classroom assignments on factors such as seniority and, instead, strategically assign classrooms so that teachers in the same subject areas or grade levels are located near each other.

A second recommendation for facilitating teacher interaction is the development of district-wide electronic listserves for teachers who teach in the same subject areas and grade levels. In a sense, these listserves would serve as *virtual hallways*, where teachers could interact without being constrained by lack of physical proximity to each other.

A third recommendation for facilitating teacher interaction is to schedule common student-free times for teachers in the same grade levels or subject areas. Traditionally, the need for shared planning time has not been taken into account when developing school and teacher schedules (Little, 1990). As a consequence, teachers have been left on their own to search out other teachers when they have a need to learn. The end result is that when teachers need help they go to an available, rather than the most knowledgeable, teacher. In a few notable instances in the participating schools, schedules had been intentionally designed so that certain teachers shared common planning periods. These teachers reported that this arrangement increased the frequency and quality of their interactions and collaborations.

In addition to facilitating teacher interaction, necessary resources for teacher learning must be allocated. Unquestionably, the resource that teachers reported they need more of than any other is time. A survey conducted by the National Education Association (1987) found that secondary teachers have 13 minutes of preparation time for each hour of instructional time. In conventional instructional design contexts this ratio is reversed with a rule of thumb of three hours of design time for each hour of instructional time. Teachers' unencumbered time continues to dwindle with the increasing demands of new instructional assignments and inclusion of special needs students in general education classrooms (Hargreaves, 1992). Teachers cope with the intensification of their jobs by spending less time interacting with peers and thinking independently. In all likelihood, these responses limit their participation in the very types of informal learning activities upon which they depend for their own development--knowledge exchanging, independent scanning, and experimentation.

In addition to time, financial support for scanning activities is necessary for fostering teacher learning. Historically, funds for professional organization memberships and conferences have been viewed as employee perks. However, the findings in this study suggest that teachers depend on these types of activities for interacting with other teachers and developing their professional knowledge. As such, there is a need to reframe our perception of such expenditures as fringe benefits, and view them as necessary for teacher development.

A third resource that is necessary for fostering teacher learning is computer technology. Increasingly, teachers are expected to use computers for administrative tasks as well as to integrate computer technology into instruction. Teachers reported that they have had to push themselves "into learning how to do all this stuff, and there are still some [teachers] that don't know how to open up their e-mail." School districts must ensure that teachers have the necessary skills to use and can conveniently access such technologies.

By themselves the aforementioned recommendations will not be sufficient for fostering teacher learning. Formal school policies, evaluation processes, and reward systems must be altered to reduce the constraints they place on teacher learning.

Formal policies in the schools in this study did not permit teachers to cover the classes of colleagues who wanted, or needed, to observe the classroom techniques of fellow teachers. As one teacher reported, in order to observe another teacher she had to request that a substitute teacher oversee her classes. Not only does this policy prohibit teachers from conducting professional development observations, but it also places an unnecessary financial burden on the school district. Obviously, an appropriate policy needs to be developed.

The data also suggest that more rigor needs to be put into the teacher evaluation process. To be blunt, most experienced teachers in this study thought that the evaluation process was a sham. According to these teachers, administrators were in their classrooms too infrequently to obtain a realistic picture of their teaching performance. Furthermore, since administrators prearranged observation times with teachers, administrators observed teachers' classrooms and performance under exceptional, rather than normal, conditions. And lastly, many teachers reported that post-observation sessions were replete with positive feedback, yet lacked constructive advice. Critical feedback is necessary for spurring teachers' reflections about their classroom practice. Unquestionably, evaluation practices must change so that they involve frequent and unplanned classroom observations. Furthermore, evaluators need to be professionally trained and competent in evaluation techniques so they are able to provide teachers with both positive and constructive feedback.

Reward systems also need to be reconsidered in relation to their effect on teacher learning. Experienced teachers reported that they are increasingly removing themselves from school activities they consider ancillary to their main teaching duties, such as involvement with co-curricular activities, child study teams, school management committees, and student teaching supervision. These types of activities are an important way in which the expertise of experienced teachers is diffused throughout the school system. However, with the intensification of their jobs, increasing demands being placed on their time, and lack of meaningful rewards for participation in non-teaching activities, experienced teachers were clearly choosing to discontinue their involvement in such activities. Reward systems need to be revised so they provide, particularly experienced, teachers with meaningful incentives for participation in non-teaching activities.

Future Research. Few empirical studies have examined the relationship between teacher learning and performance. Additional research investigating relationships between each of the learning roles identified in this study and teaching performance needs to be conducted. Furthermore, while the literature supports assertions that the types of changes proposed in this paper will positively influence teacher learning and development (for example, see Darling-Hammond, 1996; Ponticell, 1995; Showers & Joyce, 1996), few studies have examined their empirical validity. Investigations of these assertions are needed to develop greater understanding of the potential that these changes have for facilitating the professional development of teachers.

References

Corcoran, T. B. (1990). Schoolwork: Perspectives on workplace reform in public schools. In M. W. McLaughlin, J. E. Talbert, & N. Bascia (Eds.), *The contexts of teaching in secondary schools* (pp. 142-166). New York: Teachers College Press.

Darling-Hammond, L. (1996). The quiet revolution: Rethinking teacher development. *Educational Leadership, 53*(6), 4-10.

Drucker, P. F. (1988). The coming of the new organization. *Harvard Business Review, 66*(1), 45-53.

Ehly, S., Retish, P., & Shokoohi-Yekta, M. (Submitted for publication). Factors influencing teacher performance: Implications for continuing education. .

Gick, M. L. (1986). Problem-solving strategies. *Educational Psychologist, 21*(1 and 2), 99-120.

Hargreaves, A. (1992). Time and teachers' work: An analysis of the intensification thesis. *Teachers College Record, 94*(1), 87-108.

Little, J. W. (1990). Conditions of professional development in secondary schools. In M. W. McLaughlin & J. E. Talbert (Eds.), *The contexts of teaching in secondary schools* (pp. 187-223). New York: Teachers College Press.

Lovin, B. K. (1992). Professional learning through workplace partnerships. In H. K. M. Baskett & V. J. Marsick (Eds.), *Professionals' ways of knowing* (pp. 61-69). San Francisco: Jossey-Bass.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative Data Analysis*. (2nd ed.). Thousand Oaks, CA: Sage.

National Education Association. (1987). *Status of the American public school teacher 1985-1986.* Washington, DC: Author.

Ponticell, J. A. (1995). Promoting teacher professionalism through collegiality. *Journal of Staff Development, 16*(3), 13-18.

Robinson, A. G., & Stern, S. (1997). *Corporate creativity*. San Francisco: Berrett-Koehler.

Russell, T. (1993). Reflection-in-action and the development of professional expertise. *Teacher Education Quarterly*.

Schön, D. A. (1987). *Educating the reflective practitioner*. San Francisco: Jossey-Bass.

Showers, B., & Joyce, B. (1996). The evolution of peer coaching. *Educational Leadership, 53*(6), 12-18.

Smylie, M. A. (1995). Teacher learning in the workplace: Implications for school reform. In T. R. Guskey & M. Huberman (Eds.), *Professional development in education: New paradigms and practices* (pp. 92-113). New York: Teachers College Press.

Sykes, G. (1996). Reform of and as professional development. *Phi Delta Kappan, 77*(7), 465-467.

U.S. Department of Education. (1997). *From college to first-year teaching: How the U.S. compares to several other countries* (Executive summary): Author.

Learning from Experience: The Professional Practical Knowledge of Female Leaders in HRD

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This case study research explored the workplace experiences of three female HRD professionals to investigate their development and use of practical knowledge. Findings indicated that each leader's practical knowledge was structurally composed of three dimensions which had been developed into a coherent system, integrated in such a way as to generate consistent professional practice. Implications are directed toward the redesign of continuing professional education, and toward frurther research into the systems nature of the structure of practical knowledge.

Summary of the Problem

> "We have seen the leaders and they are us."
> -Ellen E. Chaffe, presidential address delivered to the
> Association for the Study of Higher Education, November 3, 1989

During the past three decades, the emerging notion of shared-power has challenged traditional assumptions about the meaning of leadership, organizational design, and the gender-stereotyping of leaders. The fundamental shift away from a conceptualization of power as domination and control over others toward power as a resource to be shared *with* others has been demonstrated politically and socially in numerous ways in this society. One practice demonstration of this shift has been the development of continuing education programs designed to provide leadership training for the enhancement of the career mobility and promotability of those females seeking to share the traditionally male-held power and responsibility in HRD in various organizations. Since the mid-1980's, these formal programs, usually designed as workshops and conferences, have offered presentations about management, legal issues, fiscal responsibility, political processes, and personal power, offering unique opportunities for the development of networks and selected skills and behaviors. But, in their design, most programs have represented the traditional information-transmission instructional design which is grounded in the technical paradigmatic assumptions criticized by Schön (1987) as fallacies foundational to "the crisis of confidence in professional knowledge" (p. 3). While their content has been highly appreciated by participants, the programs' processes have failed to reflect the reality that most professional learning occurs informally in the workplace (Carnevale, 1984; Watkins & Marsick, 1993). This recognition of the context of everyday practice as a crucible for professional development has prompted studies by policy and accrediting groups resulting in demands for reform and the redesign of professional training programs, and has also been the impetus for Cervaro's (1992) call for a new model of continuing professional education-- one more reflective of the reality of professional learning. Such entreaties suggest that leadership programs for women in HRD may be more effective learning vehicles if the program design is able to correlate the content with workplace experiences. But such a design would require an understanding of the ways in which workplace experiences contribute to the development of professional knowledge, as well as an understanding of the very nature of that knowledge as it is held and used in professional practice. The study reported in this paper addressed the need for the development of such an understanding.

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Critique of the Literature

This study was grounded in Marsick and Watkins' (1990) notion of informal workplace learning. The development of an approach to the study evolved from an exploration of four potentially rich streams of theoretical inquiry: the nature of professional knowledge, practical knowledge, professional experiences, and experience-based learning.

In 1989, Fellenz and Conti noted as a trend a shift from an emphasis on adult education to an emphasis on adult learning. Within the leadership literature, that trend was evidenced in the empirical research studies by a move away from the prevalent end-product (or what-a-leader-is-like) orientation criticized by McCauley (1986), and toward means-oriented inquiry which attempted to develop an understanding of *how* leaders engaged in real-life learning (McCall, Lombardo & Morrison, 1988; Morrison, White & VanVelsor, 1992). These more process-oriented conceptual approaches honored the emerging notions of the nature of professional knowledge which were so perceptibly presented by Schön in 1987. Schön addressed the "crisis of confidence in professional knowledge" (p. 3) by characterizing the real world of practice as a context where practical knowledge develops in the "swamp" of an unstable, conflict-ridden environment where ambiguity and competing value systems create the challenge of subjective decision-making (Cervaro, 1989). Schön's argument about the disparity between the inadequate normative professional curriculum (espousing universal models of practice falsely based in the technical epistemological paradigm) and the reality of professional practice contexts cast attention upon the constructivist paradigm and the epistemological position of the practical.

As a system of beliefs about knowledge, the practical viewpoint considers that professional knowledge is very context dependent in its application, and that professionals are "practical theorists" (Brookfield, 1986) who make decisions based upon wisdom and competence (Houle, 1972) in ambiguous circumstances. Benner (1982) explains that professional expertise is developed through the integration of abstract knowledge into one's repertoire of practice knowledge, where theories are challenged and where preconceived notions are refined with nuance, subtlety, and shades of difference. Practical knowledge, which is "know-how" composed of personal and explicit knowledge, has been embraced by researchers concerned about the ways such knowledge becomes developed through professional work (Benner, 1984; Clandinin and Connelly, 1987; Elbaz, 1981). Because those researchers present practical knowledge as having content and structure as well as those aspects of knowledge that arise out of bodily experience, and because the associated research employs combinations of cognitive and affective approaches such as the documentation of practical actions and biographical history, experience-based learning has come to be employed as a central construct of research in practical knowledge.

The notion of learning from experience has a long and deep tradition in the literature extending back to Aristotle. Although often identified with the progressive movement in this country through the theory-building of John Dewey and Eduard Lindeman, as a central philosophical idea in education it arises from a very complex literature with no established holistic model of how we learn from experience. Dirkx and Lavin (1991) have suggested several ways in which the heterogeneous blend of perspectives can be organized, alternately focusing upon the individual learner or the learners' socio-political context, or focusing upon the experience-based learning processes themselves.

The confluence of these four areas of literature-- professional knowledge, practical knowledge, professional experience, and experience-based learning-- directly reinforces the importance of Cervaro's (1992) recommendation that research supporting the development of a new model of continuing professional education be focused on both "the development of practical knowledge" and "the processes by which professionals use their practical knowledge in their practice contexts" (p. 98); but the literature has not evidenced a connection between practical knowledge and experience-based learning sufficient to inform the creation of such a model.

Purpose of the Study

Toward that end, this study set about illuminating the very nature of practical knowledge by investigating how female HRD leaders had developed that knowledge through their professional experiences and how they used it in practice. Grounded in a constructivist epistemology by the very nature of its central construct, the study specifically sought to identify the representation of that knowledge through a conceptual framework of the structural components of practical knowledge. The framework, originally developed by Elbaz (1981), was operationalized in this study according to the following definitions: Rule is a declaration of what to do or how to do it in a practice situation. Principle is a broader statement which embodies the practitioner's purpose in a

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deliberate and reflective way. Image is a meta-level organizer, a metaphoric statement guiding the intuitive realization of purpose.

Method

Continuously from 1985 to 1997, a state-wide leadership program has been offered as a collaborative effort between the Department of Education and the University of Nebraska-Lincoln. Supported with federal sex-equity vocational funding, this program has each year invited a nominated cohort of approximately 25 women to participate in the program. Three purposefully-selected participants were investigated in this qualitative study. They had participated in the program during one year between 1986 and 1990, currently held leadership positions, and, similar to the women in Astin and Leland's (1991) research, represented positional as well as non-positional leaders. The study's phenomenological approach (van Manen, 1990) utilized a case study design guided by Yin's (1989) process model. A series of in-depth structured and semi-structured interviews included a critical incident interview in the form of a Behavioral Event Interview (Finch, Gregson, & Faulkner, 1991), a narrative life-history, and an administered descriptive questionnaire interview designed to gather demographic data along with career-related factors and behaviors. All interviews were audio-taped and transcribed verbatim. Each Leader was treated as a separate case, and cross-case analyses were supported by Yin's pattern-matching logic to strengthen internal validity. Throughout data analysis, *all* of the data sources were reviewed repeatedly in a series of iterations (Huberman & Miles, 1994), a process which developed the findings in consistently more illuminated ways, creating a circle of understanding. Maxwell's (1996) analytical strategies of categorizing, contextualizing, and memoing were employed; and while triangulation and member-checks were used to support internal validity, external validity was assured through analytic generalization (Yin, 1989) and the use of rich, textured descriptions (Merriam, 1991).

Data analysis was conducted in two phases. Phase I consisted of three iterations. During the first iteration, the context of the study was established by the development of individual narrative profiles which both provided the biographical backgrounds for the subsequent event accounts and functioned to provide protection for practical knowledge as the focus of the inquiry. The second iteration focused upon the three Leaders' individual narrative accounts of critical professional incidents which were analyzed for evidence of their inherent structure of practical knowledge. Individual graphic summary analyses demonstrating each of the three structural areas of practical knowledge were organized along a thought-action continuum and were combined in the third iteration to facilitate a cross-case analysis of the findings across the structural areas of Rule, Principle, and Image. It was this process which demonstrated replicated patterns of consistency sufficient to generate a theoretical model of the Leaders' practical knowledge. As an outcome of the analytical process, this was critical, for case studies do not generalize to populations, only to theoretical constructs. It is for this reason that three cases is an adequate a number to provide reliable findings.

In Phase II, all of the data were analyzed for representations of the four processes of experience-based learning-- trial and error, problem solving, creating, and discerning-- as delineated by Dirkx and Lavin (1991). Then, findings from the three categories of practical knowledge developed in Phase I were considered for their relationship to or representation in those process categories of experience-based learning, and a model of those categories was developed.

Findings and Conclusions

This inquiry developed case studies about three HRD leaders, between 40 and 50 years of age, all holding masters or doctoral degrees. Since participating in the leadership program, all three have progressed into positions with greater breadth of responsibility and influence. Alison is a university professor of Business and HRD whose stories focused around her decision-making in choosing to relinquish a high-level administrative position in favor of a faculty role, and her continuing pursuit of "balance" within her sphere of work and her own professional development. Betty is a researcher and HRD curriculum development specialist with a unit providing state-wide staff-development for practitioners involved in legal and case-management services for the Department of Human Services. Her practical knowledge was expressed through stories of her professional socialization as she facilitated a difficult community agency-integration project. Carol is a director with the state educational oversight agency and has responsibility for the development of personnel as well as compliance in numerous federally-funded education and job-training programs for women. She told stories about workplace events in which she developed a personal understanding of powerlessness and marginalization and the impact of the associated meaning-making upon her professional purpose.

The cross-case contextual findings indicated strong similarity in the descriptive patterns of the environmental factors perceived as affecting their assumption of leadership roles, and indicated that all three women have employed similar strategies to strengthen their career potential.

The participants in this study all explain their learnings or lessons as related, or as falling into thematic categories which, when considered in a holistic way, help them to make sense or understand in a new or different way. They stress that they ponder and think about this relatedness, and purposively apply their knowledge in the decisions and actions of their daily work. Although their life histories and work experiences are distinctly unique, results of the cross-case analysis indicated that their holistic knowledge demonstrates a common internal structure. All three Leaders expressed their practical knowledge in terms of the following dimensions:

(1) singular, metaphorical Images which serve as meta-organizers for their knowledge. The Images are stable. They are open to change through new experiences, but only in the development of depth and complexity. For example, one Leader speaks of now being able to "see" her image in both upright and inverted positions, suggesting two opposing yet complimentary dimensions of her knowledge. Leaders select their metaphors from the world around them, finding an affinity with those that resonate with their purpose. For example, in the preface to their 1993 book (p. xiv), Watkins and Marsick discuss how their resonance with the process of the works of the sculptor Elisabet Ney came to be represented in the title of that book.

(2) a set of Principles which express an internally consistent and coherent sense of purpose, representing the way they both construe themselves as professionals and assert their professional commitment. For example, one leader creates a circular logic with Principles that first involve her dedication to her own learning in order to better effect the learning of others, and then her inability to "make" anyone but herself learn, leading her back to responsibility for her own learning and development. The internal consistency functions to monitor the ethic and continuing integrity of purpose.

(3) a set of Rules which guide the actualization of their purpose. The Rules are both behavioral and existential in their action orientation. For example, one leader who expressed her overall purpose as, "getting women prepared and welcomed into the workplace as colleagues and equals," expressed her rules as determination to always both battle strategically (pick her fights carefully) and be proactive, i.e. vigilant in watching for opportunities to fight ("to help other people to come along, to educate them," thereby advocating for the learners and the trainers in the programs for which she has responsibility).

It was concluded that, through their experience-based learning processes, the leaders in this study had developed these dimensions into holistic systems of practical knowledge which were integrated in such a way as to enable them to generate the consistent practice which supported their professional success. These systems were expressed as stable yet evolutionary in their openness to the development of increasingly encompassing levels of meaning, suggesting that practical knowledge is not fixed, but something one holds in active relation to practice and uses to shape one's work. The alignment of those system's structural dimensions along a thought-action continuum support the critical continuous interplay of the inner-outer, or intuitive-reflective processes of leadership. A conceptual model of the structure of practical knowledge, developed upon the cross-case analysis of the three leaders, is illustrated in Figure 1.

From the analysis of the interview data in relation to the theories of learning from experience it was concluded that the Leaders have developed their practical knowledge by engaging in all of the four categories into which the theories had been sorted. In their critical incident stories the Leaders demonstrated that in a given situation, theories from several categories were represented as being used in combination. For example, a trial and error process might be followed immediately by a problem-solving process and might find expression in a creative communication or even an artistic response as a vehicle for self-understanding.

The findings suggest that the theories of experience-based learning inform an understanding of practical knowledge in two ways. As a phenomenon, the theories illuminate the learning processes through which the practical knowledge is developed and refer to the fact that learning takes place within the crucible of our life experiences and cannot be separated from them. As a concept, experience-based learning provides a means of developing a theoretical understanding of how lived experiences influence what is learned and vice-versa. This practical knowledge is held and used as an integrated system of purpose based on an individual's thought/action relationships.

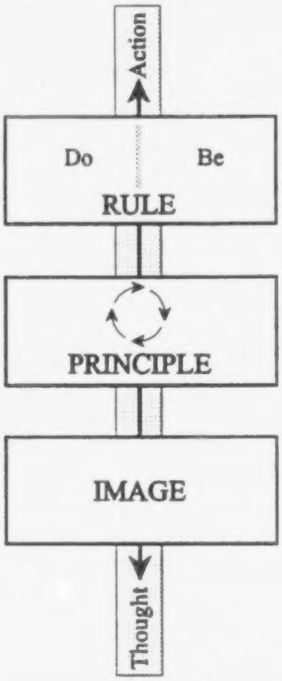

Figure 1. A conceptual model of the structure of practical knowledge as it is held and used by selected female HRD leaders in Nebraska.

Implications for Practice and Research

Implications for Practice

As a demonstration of the structural relationship of the dimensions of practical knowledge, these findings form a theoretical model of practical knowledge which may serve, as vanManen (1990) favors, not to stand before practice in order to inform it, but rather to enlighten practice. The acknowledged importance and relevance of practical knowledge has been based largely on assumptions and on its association with experience-based learning. However, there has been little empirical research to clarify its nature or identify the means of its development in concert with more formal means of learning. The multiple calls for research to guide reform and the transformation of professional leadership development in education have included the recommendation that such practice be built upon practical knowledge and upon gender-inclusive theory, and that such theory be based in empirical data, specifically the documentation of experiences. The findings of this study contribute to such theory development and extend the notions about experience-based learning processes (Dirkx & Lavin, 1991) to their eventual outcomes by providing a map of the territory toward which one's workplace experiences and developmental experiences lead, and it is this theoretical relationship which holds the greatest promise for continuation of the research.

This model of practical knowledge contributes but one more piece to the mosaic of understanding about leadership. Basing their new work in Kegan's (1982) notion of meaning-making, Palus and Drath (1995) have posed the question, "How do individuals and systems evolve the capacity to make more encompassing, adaptive, and sufficiently complex meaning?" (p.13). The model of practical knowledge which emerged from this study contributes to their work by providing a demonstration of that capacity as it is held and used as a social meaning-making process within the socio-political context of the workplace. "...The argument in support of such an offering consists not of defending the truth of the scheme but rather of arguing for its efficacy in understanding leadership as a concept and phenomenon" (Drath and Palus, 1994, p. 5).

about leadership. Basing their new work in Kegan's (1982) notion of meaning-making, Palus and Drath (1995) have posed the question, "How do individuals and systems evolve the capacity to make more encompassing, adaptive, and sufficiently complex meaning?" (p.13). The model of practical knowledge which emerged from this study contributes to their work by providing a demonstration of that capacity as it is held and used as a social meaning-making process within the socio-political context of the workplace. "...The argument in support of such an offering consists not of defending the truth of the scheme but rather of arguing for its efficacy in understanding leadership as a concept and phenomenon" (Drath and Palus, 1994, p. 5).

Through this understanding, the planners of leadership programs may engage in more effective practice. The adoption of problem-based learning and other reconfigurations of curricular design have done much to embed life experience into the critical content of professional training programs, and the notion of professional practical knowledge as a structure which represents the "knowing" which is recognized as expertise can only extend these approaches to more comprehensive applications in program design and in the building of learning into the fabric of everyday work experiences.

The results of this study could help provide HRD professionals with tools to, as Senge (1990) recommends, help work itself "become more 'learningful'" (p. 4). In learning how to assess and identify their own practical knowledge, leaders could develop a critically valuable vehicle to help them self-manage their professional development, as McLagen (1983) has urged. By becoming more aware of their own systems of practical knowledge, they could more knowingly monitor the integrity of their beliefs and cognitive processes as thought, and their existential orientations and performance as action. This would support the generation of consistent practice behavior, similar to that discerned in the three leaders in this study.

Implications for research

Iimplications of the findings and conclusions presented in this paper suggest a need for:

1.) a more extensive exploration of the relationship between the structure of practical knowledge and the processes of learning from experience. The use of the shared thought-action continuums of these frameworks as a guiding construct could help illuminate the critical connections between knowing and successfully performing, and

2.) a more developed illustration of the systems nature of the structure of practical knowledge which could provide greater insight into the optimization of selected experiential learning processes within holistic developmental schemes.

The responsibility to continue the work of this research is compelling, for we have seen the leaders and, indeed, they are us.

References

Astin, H. S., & Leland, C. (1991). Women of influence, women of vision. San Francisco: Jossey-Bass.

Benner, P. (1982). From novice to expert. American Journal of Nursing, 82, 402-407.

Benner, P. (1984). From novice to expert. Menlo Park, CA: Addison-Wesley.

Brookfield, S.D. (1986). Understanding and facilitating adult learning. San Francisco: Jossey-Bass.

Carnevale, A. (1984). Jobs for the nation: Challenge for a society based on work. Alexandria, VA: American Society for Training and Development.

Cervaro, R. M. (1989, April 27-29). A framework for effective practice in adult education. Proceedings of the 30th Annual Adult Education Research Conference, (pp.61-66). University of Wisconsin-Madison.

Cervaro, R. M. (1992). Professional practice, learning, and continuing education: An integrated perspective. International Journal of Lifelong Education, 11(2), 91-101.

Clandinin, D. J., & Connelly, F. M. (1987). 'Teachers' knowledge: What counts as personal in studies of the personal'. Journal of Curriculum Studies, 19(6), 487-500.

De Ciantis, C. (1995). Using an art technique to facilitate leadership development. Greensboro, NC: Center for Creative Leadership.

BEST COPY AVAILABLE

Dirkx, J. M., & Lavin, R. (1991). Understanding and facilitating experience-based learning in adult education: the FOURthought model. Proceedings of the Tenth Annual Midwest Research-to-Practice Conference (p.80-86). University of Minnesota at St. Paul.

Drath, W. H. & Palus, C. J. (1994). Making common sense: Leadership as meaning-making in a community of practice. Greensboro, NC: Center for Creative Leadership.

Elbaz, F. (1981). The teacher's "practical knowledge": Report of a case study. Curriculum Inquiry, 11(1), 43-71.

Fellenz, R. A., & Conti, G. J. (1989). Learning and reality: Reflections on trends in adult learning (Information Series 336). Columbus: ERIC Clearinghouse on Adult, Career, and Vocational Education, The Ohio State University.

Finch, C. R., Gregson, J. A., & Faulkner, S. L. (1991). Leadership behaviors of successful vocational administrators (MDS-097). Berkeley, CA: National Center for Research in Vocational Education, University of California at Berkeley.

Houle, C. O. (1972). The design of education. San Francisco: Jossey-Bass.

Huberman, A. M., & Miles, M. B. (1994). Data management and analysis methods. In N. K. Denzin & Y. S. Lincoln (Eds.), Handbook of Qualitative Research. Thousand Oaks, CA: Sage.

Kegan, R. (1982).The evolving self: Problem and process in human development. Cambridge , MA: Harvard University Press.

Marsick , V. J., & Watkins, K. E. (1990). Informal and incidental learning in the workplace. New York: Routledge.

Maxwell, J. A. (1996). Qualitative research design: An interpretive approach. (Vol. 41). Thousand Oaks, CA: Sage.

McCall, M. W., Lombardo, M. M., & Morrison, A. M. (1988). The lessons of experience: How successful executives develop on the job. Lexington, MA.: D. C. Heath, Lexington Books.

McCauley, C. D. (1986). Developmental experiences in managerial work: A literature review (Technical 26): Center for Creative Leadership, Greensboro, NC.

McLagen, P. (1983). Models for excellence: The conclusions and recommendations of the ASTD training and development competency study.. Washington, DC, ASTD Press.

Merriam, S. B. (1991). Case study research in education: A qualitative approach. San Francisco: Jossey-Bass.

Morrison, A. M., White, R. P., & Van Velsor, E. (1992). Breaking the glass ceiling. Menlo Park, CA: Addison-Wesley.

National Policy Board for Educational Administration. (1989). Improving the preparation of school administrators: An agenda for reform . Charlottesville, VA: University of Virginia.

Palus, C. J., & Drath, W. H. (1995). Evolving Leaders: A model for promoting leadership development in programs. Greensboro, NC: Center for Creative Leadership.

Schön, D. (1987). Educating the reflective practitioner. San Francisco: Jossey-Bass.

Senge, P. M. (1990). The fifth discipline: The art and practice of the learning organization. New York: Doubleday Currency Press.

vanManen. (1990). Researching lived experience. Albany, New York: State University of New York Press.

Watkins, K. E., & Marsick, V. J. (1993). Sculpting the learning organization. San Francisco: Jossey-Bass.

Yin, R. K. (1989). Case study research: Design and methods. (Vol. 5). Newbury Park, CA: Sage.

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